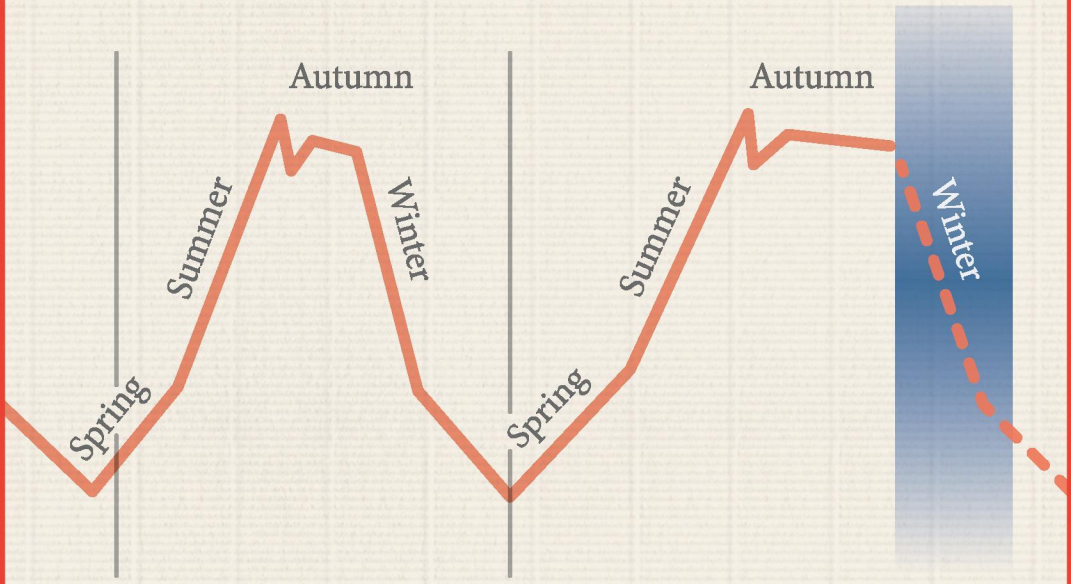
THE DOG BONE PORTFOLIO

A Personal Odyssey into the First Kondratieff Winter of the Twenty-First Century



Margret Kopala with John Budden

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The decisive crisis will … not be in Britain, now merely a weak province of a decaying currency system, but at the centre in the United States. It may not come until the next cycle of recession and boom. Until the centre fails, the extremities may well be supported, but when the centre fails, the extremities will fail also. Politicians seldom move ahead of events, and the attempt to do so can be broken for want of public support, but events will in due course destroy the floating paper system … When the paper system collapses, the survivors will dig in the rubble and they will find gold.

–WILLIAM REES-MOGG, 1974

It is the role of the entrepreneur qua businessman or financial advisor – a key figure in Austrian economics – to try to predict future events. But he must be a loner, a contrarian, to do so.

–MARK SKOUSEN, 2009

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To the memory of
The Right Honourable Lord William Rees-Mogg
(1928–2012)

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Authors' Preface

A Note from Margret Kopala

This book discusses key aspects of the post-2008 economy and offers investment strategies to help navigate its difficult financial markets. With the help of John Budden and the other fine analysts introduced in this book, it is what I, a novice investor, have learned since the market crash of 2008. As such, it is a hybrid work in which Kondratieff long-wave scholarship and related market analysis provide signposts for a personal odyssey that, in 2015, remains ongoing. Its most important lesson is the need to understand the big economic picture.

In part 1, I introduce the life and work of a post-revolutionary Russian economist named Nikolai Kondratieff. His defining macroeconomic perspective reveals that to all things, including capitalist economies, there is a season and that, in 2014–15, we remain in the trough, or Winter season, of the long-wave cycle he identified. Along with the multiplicity of productive, monetary, political, and other factors intrinsic to the long wave's behaviour, part 1 also demonstrates how Kondratieff laid the groundwork for understanding our economies as a function of these many synergies, including those created by technological innovation and energy. It further explains how and why our central banks and governments may delay, but not necessarily prevent, the depressionary tide that washes over and diffuses an Old Economy in order for a New Economy to grow.

Because this Kondratieff Winter could last well into the second decade of the twenty-first century, parts 2 and 3 consider longer-term economic and investment prospects and conclude that, without the growth successful economic transitions bring, achieving personal financial security, much less real investment returns, will be a challenge. Part 4 then considers how the next New Economy might unfold. The appendices conclude *The Dog Bone*

Portfolio by focusing more closely on events and issues that must be addressed before global economic and investor success – that is, a Kondratieff Spring – is fully possible. In the meantime, and no matter the geographic region or asset class in which we are invested, the reader will learn how events on the global stage are affecting the value of what we own and why, like adventure capitalist Dean LeBaron's neighbourhood dog, Fido, which buries a number of bones in different hiding places, we had better be certain about what comprises our bones – that is, the asset classes in which we invest, and where we bury them.

A Note from John Budden

I have been involved in the investment business since the mid-1960s. I worked in Canada, Europe, London, and, for ten years, in Boston. In 2002 I returned to my hometown, Ottawa, the capital of Canada and one of the best-kept secrets in this surreal world. One of the macroeconomic factors that lured me back was the dirt-cheap Canadian dollar, which was trading at $.63 to the greenback. The world had not figured out that Canada was on the way to cleaning-up its economic act and that it was sitting on a treasure trove of natural resources. My travels had opened my eyes and made me passionately Canadian.

By early 2003, the commodities bull market was coming out of the gate. Oil was trading at under $20 (U.S.) a barrel, gold was selling at give-or-take $300 (U.S.) and silver at $4.50 (U.S.) an ounce, copper at $.71.5 (U.S.) a pound, potash $155 (U.S.) per metric tonne (U.S.), and corn at about $2.20 (U.S.) a bushel. Global acquisitors were already preparing to pounce on our great Canadian resource companies.

At the time, I was seconded by CFRA, a popular Ottawa news/talk radio station, now owned by Bell Media, as their markets commentator. We all know that commenting on the antics of markets is a mug's game, analogous to long-term weather forecasting. So, in my search for the Holy Grail, I decided to interview a number of my old friends who had survived and prospered

through bull and bear markets, financial chicanery, and central bank and government manipulation.

Through these initial interviews, I discovered a clear pattern in the convergence of knowledge and opinion among these informed investment thinkers who excelled by identifying long-term money-making trends – a skill augmented for me by sentiments expressed by Old Turkey in Edwin Lefèvre's classic *Reminiscences of a Stock Operator*. "If I sold that stock now I'd lose my position," he explained to urgings that he unload a stock, "and then where would I be?"[1]

A common thread among these savvy investors was a reverence for the long-wave theories of Nikolai Kondratieff – the now legendary Russian economist who was executed by firing squad in 1938 at the behest of Joseph Stalin. I had already developed a fascination with Kondratieff, but now, by aggregating and assimilating their opinions, I was able to hone in on the evolving long-wave economic trends. So when Margret Kopala asked me to contribute to this book, I knew exactly what to do and whom to call.

The interviews that resulted appear in this book (chapter eight). They are a compendium of sage and eclectic macroeconomic observations and the market perspectives from some of the best and brightest minds I have come across over the years. I hope they will help you win the battle for investment survival through the latter part of what we call Kondratieff Winter, a period that could last into the 2020s with social and economic upheaval that could materially affect our quality of life and financial well-being. So, as we say in radio … "Listen up."

Acknowledgments

As with much else in *The Dog Bone Portfolio*, this acknowledgments page borrows from the work of investment experts James Dale Davidson and the late Lord William Rees-Mogg, who point to the collaborative nature of all books. But unlike Davidson and Rees-Mogg, or the distinguished human geographer and University of Texas professor Brian J. L. Berry, whose Kondratieff scholarship forms the basis of my approach to the long-wave cycle, I, as a non-expert, have relied intensively on the work of others. Written as a primer, *The Dog Bone Portfolio* is no substitute for reading the key works of these and other economic and financial analysts who are referenced throughout and whose writings may inform not just Canadian citizens, investors, and policy-makers, but their global counterparts everywhere. These analysts are among the larger-than-life characters now appearing on a digitized global stage where, it is no exaggeration to say, an economic drama, with a denouement yet to make itself known, has reached Shakespearian proportions. Villains are being exposed, dei ex machina are routinely introduced and discarded, and heroes and history are being made.

Among the heroes are those who have stood by the theories of an obscure, controversial Russian economist named Nikolai Kondratieff. Uncompromising and courageous in the face of so much economic uncertainty while divining the longer-term investment perspective demanded by long-wave analysis, Dean LeBaron, J. Anthony Boeckh, Ian Gordon, Larry Jeddeloh, Don Lindsey, the late Lord William Rees-Mogg, Jim Rogers, Eric Sprott, and Ronald-Peter Stöferle not only offer investment advice but speak truth to power as only those who must responsibly manage money can. For both John Budden and me, it is a privilege beyond expression to appear in their company in these pages.

I also gratefully acknowledge my personal heroes whose support, encouragement, and practical advice, made this book possible. First, award-winning Canadian newspaper columnist Roy MacGregor who, upon observing

my concerned involvement as an ordinary Canadian during Canada's constitutional crisis in 1990, addressed me in a private communication as "Commissioner Thirteen" – a reference to the national panel of twelve citizens convened by the Canadian government to study the crisis. At the time, Ottawa economist Gail Stewart also encouraged my fledgling efforts at citizen responsibility, particularly where my writing and political activities were concerned. Marjorie Bowker, the late family court judge, wrote books on the issues of her day, which, though controversial, laid the foundation for a national conversation and created a model for this book. Susan Riley, Peter Robb, John Godfrey, Sheila Brady, Graham Greene, and David Watson gave me space in the newspaper sections they edited. Having bestowed this mantle upon me, one I continue to wear with a great sense of humility and unease, all set me on a public policy track I have since pursued in a variety of ways. Back then, I never imagined it would lead to work in investment and finance, but the market crash of 2008 left me no choice. I was compelled to find out why I lost money and what to do about it.

In this latter respect, I owe a deep debt of gratitude to my guide, mentor, and co-author, John Budden. His commentary and his interviews with some of the world's finest investment minds opened up a new world of investment possibility for me and form the backbone of this book. It goes without saying that his personal encouragement and market insights proved indispensable to the book's progress and completion.

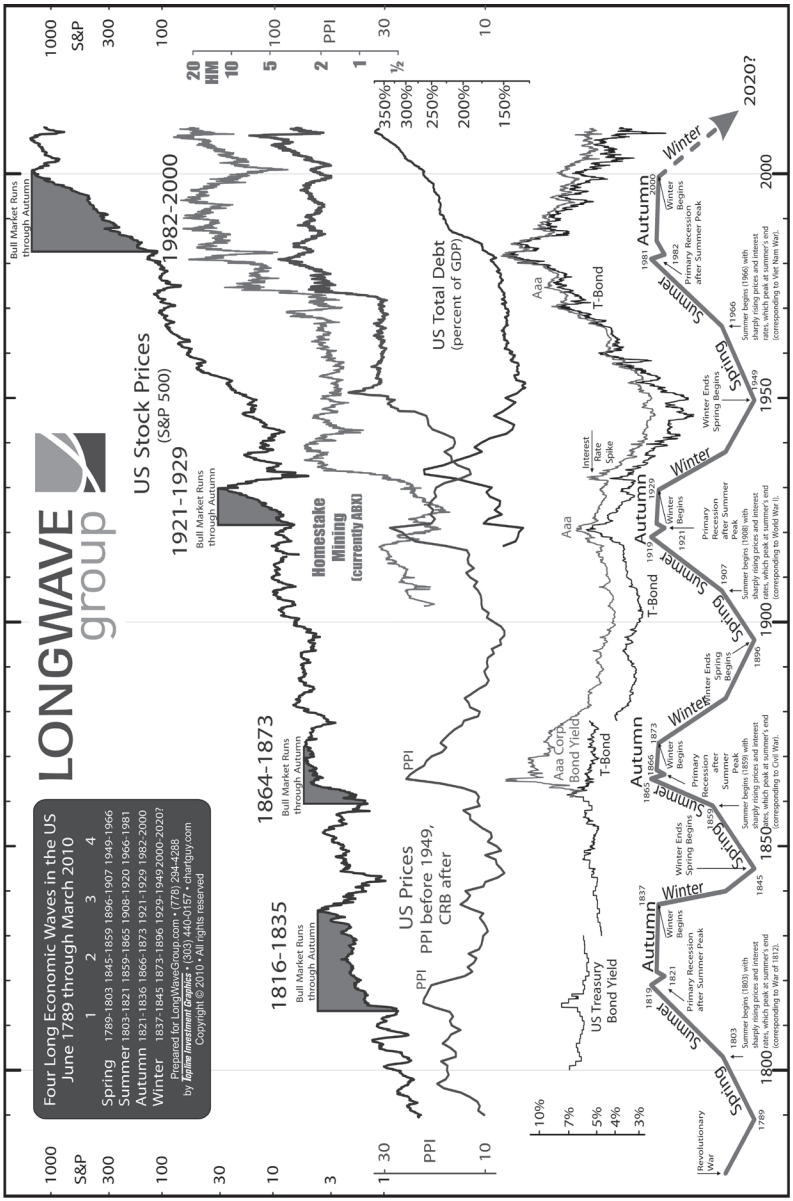
While all errors are my responsibility, *The Dog Bone Portfolio* would not have been possible without the prepublication feedback essential to determining its accuracy and how to go about publishing it; in particular: Donald George, former dean of the Carleton Faculty of Engineering; David van Praagh, author and professor emeritus of journalism at Carleton University; Susan Howell, retired Foreign Affairs civil servant; Denise Goulimis, former London-based financial services adviser; Louis DeSerres, Montreal-based financial services adviser; Dean LeBaron, adventure capitalist (who suggested the title of the book); Marilyn Pitchford, former CFO of Batterymarch Financial (who suggested its subtitle); George Matheson, retired psychologist; and Arthur Cordell, adjunct professor of economics at Carleton University. Salim Mansur introduced me to Linda McKnight, who set the book on a path to publication; Donald G. Bastian brought it home.

Nida Ali, Anne Johnstone, Bohdan Yankowsky, and Iris Bradley made retreats available to me for productive writing sessions. Martin Collacott, James Bissett, Harry Weldon, and other colleagues at both the Centre for Immigration

Policy Reform and the Ottawa "thinking tank" POGG (the acronym for Canada's founding principle of peace, order, and good government) were patient with my absences above and beyond the dictates of professional respect. The nudgings, exhortations, and general encouragement of my sister, Dr. Lili Kopala, and friends Margaret Mooney, Robin Jackson, Iris Bradley, Dr. Gail Ivanoff, and Manko Rongongo, plus everyone at Ottawa's Ukrainian Orthodox Cathedral, simply kept me going. The unflinching support and literary acumen of my husband, author, journalist, and political theorist Dr. Robert Sibley, and our son, psychologist Dr. Daniel Kopala-Sibley, not only inspired me but also held my writing to a higher standard.

My heartfelt thanks to all.

Margret Kopala, Ottawa



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http://www.longwavegroup.com/market/charts/_pdf/Kondratieff_Cycle_Chart.pdf

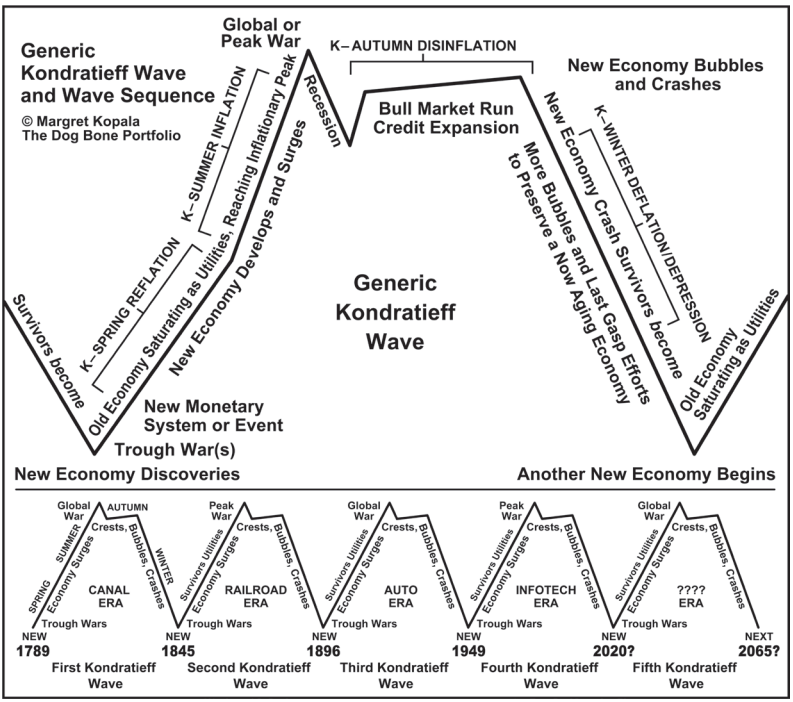

Figure 2 Copyright © 2015 Margret Kopala

These charts are key to understanding the cyclical factors affecting the "big economic picture" in which the global economy finds itself; in a sense, this book is an extrapolation of the financial and economic movements delineated herein. For ease of reference, they are placed at the beginning of this book.

Introduction

The Grey-Green Room

IT was November 13, 2008, and the small, grey-green room with sloping ceilings and velvet curtains felt particularly womb-like. A third-floor refuge in our Victorian-era Ottawa home, its serenity was breached only by the occasional thrum of nearby traffic or the monotonous noise of a small, old-fashioned television set tucked among the books lining one wall and now tuned, constantly, to the financial news network. Following several nerve-wracking days of watching the markets, I was hoping to catch a nap, but at around 2:00 p.m. EST, in addition to the usual display of stock market quotes, the small screen revealed the then President of the United States, George W. Bush, approaching a podium.

"Thank you very much. Please be seated," he said to a standing ovation.

New York City's Manhattan Institute, a think tank founded in 1978 by William Casey, who later became President Ronald Reagan's CIA director, was providing the platform for a much-needed presidential statement.

"I appreciate you giving me a chance to come and for me to outline the steps that America and our partners are taking and are going to take to overcome this financial crisis," Bush continued.

From record-breaking highs that saw the Dow Jones Industrial Average break 14,000 in October 2007 and the Toronto Stock Exchange exceed 15,000 in June 2008, by November 13, both had cascaded to lows of 8,500 and 9,300 respectively. With them, incalculable amounts of paper wealth – including a sizeable portion of mine – disappeared. Major banking institutions in the U.S. and Europe were dropping like flies. Already, mortgage finance giants Fannie Mae and Freddie Mac had been bailed out, as well as Wall Street giants AIG and Merrill Lynch. And, with distraught clients having withdrawn $17 billion

in two days, Bear Stearns, a major global investment bank and one of the nation's largest underwriters of U.S. mortgage bonds, had been snapped up by JP Morgan Chase & Co. for less than the value of its real estate. Only Lehman Brothers was left to twist in the wind, leaving many wondering who would be next. Four months after the fact, Congressman Paul Kanjorski would reveal that an electronic run on the money markets had been narrowly averted. Later, on March 9, 2009, on PBS's Charlie Rose show – with the Dow at 6547 and the TSX at 7566 – Wall Street legend Barton Biggs, manager of Traxis Partners and Morgan Stanley's chief global strategist, would lay 50 percent odds that the current "depression" would have a happy outcome; 30 percent odds that, like Japan, the stock market would be "lousy" with permanent wealth destruction and a standard of living for Americans that would be flat for ten years; and 20 percent odds that there would be a real economic disaster.

President Bush had some explaining to do.

As a novice investor, with important decisions to make about my investments, I watched, riveted, hoping for a sign.

"Over the past decade, the world experienced a period of strong economic growth," the outgoing President said, his voice sounding particularly small in New York's historic, but cavernous, Federal Hall National Memorial. Then, in an oblique reference to the massive number of U.S. Treasuries purchased by China and Japan, he continued:

> Nations accumulated huge amounts of savings, and looked for safe places to invest them. Because of our attractive political, legal, and entrepreneurial climates, the United States and other developed nations received a large share of that money.
>
> The massive inflow of foreign capital, combined with low interest rates, produced a period of easy credit. And that easy credit especially affected the housing market. Flush with cash, many lenders issued mortgages and many borrowers could not afford them. Financial institutions then purchased these loans, packaged them together, and converted them into complex securities designed to yield large returns. These securities were then purchased by investors and financial institutions in the United States and Europe and elsewhere – often with little analysis of their true underlying value.
>
> The financial crisis was ignited when booming housing markets began to decline. As home values dropped, many borrowers defaulted on their mortgages, and institutions holding securities backed by those mortgages

> suffered serious losses. Because of outdated regulatory structures and poor risk management practices, many financial institutions in Europe and America were too highly leveraged. When capital ran short, many faced severe financial jeopardy. This led to high-profile failures of financial institutions in America and Europe, contractions and widespread anxiety – all of which contributed to sharp declines in the equity markets.
>
> These developments have placed a heavy burden on hard-working people around the world. Stock market drops have eroded the value of retirement accounts and pension funds. The tightening of credit has made it harder for families to borrow money for cars or home improvements or education of their children. Businesses have found it harder to get loans to expand their operations and create jobs. Many nations have suffered job losses, and have serious concerns about the worsening economy. Developing nations have been hit hard as nervous investors have withdrawn their capital.
>
> We are faced with the prospect of a global meltdown.

Following this potted history of the subprime mortgage crisis, with its emphasis on Asian savings overinvested in U.S. housing that resulted in such widespread financial devastation, Bush reassured his audience that governments around the globe were taking unprecedented steps to recapitalize financial institutions. In addition, he said, they must make the financial markets more transparent and better regulated. Credit default swaps (financial products that insure against potential losses, he helpfully explained) must be processed through centralized clearinghouses instead of through unregulated over-the-counter markets. The integrity of the markets must ensure against market manipulation and fraud while co-operation between the world's financial authorities had to be strengthened. Then, after extolling the virtues of the free-market capitalist system, he conceded the catastrophic nature of the situation with all its implications for U.S. global supremacy and invoked the obligatory all-American battle cry:

> We're facing this challenge together and we're going to get through it together. The United States is determined to show the way back to economic growth and prosperity. I know some may question whether America's leadership in the global economy will continue. The world can be confident that it will, because our markets are flexible and we can rebound from setbacks. We saw the resilience in the 1940s, when America pulled itself out of Depression, marshaled a powerful army, and helped

> save the world from tyranny. We saw that resilience in the 1980s when Americans overcame gas lines, turned stagflation into strong economic growth, and won the Cold War. We saw that resilience after September the 11, 2001, when our nation recovered from a brutal attack, revitalized our shaken economy, and rallied the forces of freedom in the great ideological struggle of the 21st century.
>
> The world will see the resilience of America once again. We will work with our partners to correct the problems in the global financial system. We will rebuild our economic strength. And we will continue to lead the world toward prosperity and peace.
>
> Thanks for coming and God bless.[1]

Manhattan Institute patrons dutifully applauded what was presidential gobbledygook to me. I had taken Economics 101 at university, but what little I remembered did nothing to help me understand references to capital flows and over-the-counter markets. Yet somebody on that 13th day of November 2008 understood or, at least, believed. George W. Bush may not have walked on water, but for a few moments, according to the television screen in the grey-green room, he certainly raised the markets. The Dow Jones Industrial Average closed up 553 points, at 8835.25.

It was a lesson in White House messaging I, too soon, would forget. On Friday, November 21, 2008, President-elect Barack Obama used the same trick, and the markets responded accordingly, and this time, at least until March 2009, more convincingly. The Dow Jones Industrial Average had hit a new low early on November 21, only to explode upwards after the announcement of Timothy Geithner's appointment as Treasury secretary, closing at 8046.42, up 494.37. But, reeling from the magnitude of the losses I was sustaining, I had given my broker my sell order that same morning. Like the millions of investors who simultaneously lose their nerve, then the contents of their stomach, and thus create market bottoms, I was out of the markets.

Selling at the Bottom

Selling at the bottom was not the first, nor would it be the last, of the mistakes I would make in the turbulent and uncertain markets of 2008 and 2009. I was then approaching my mid-sixties and, like many women of my generation making their way as players in the world's markets, had some modest savings, in my case from a life in freelance media work – first for the BBC in the U.K., then in independent films, and then writing. I came late to motherhood, and

then, foregoing an income, my middle years were given to home life blended with community and political activism. A family inheritance and property proceeds, combined with my husband's Registered Retirement Savings Plan (RRSP) and pension, meant we could look forward to a viable retirement.

My first foray into the markets took place at the end of 2001. The dot-com bubble had burst and dispersed, but, like most people who had no expectation of ever being in the stock market, I paid little attention. When, unexpectedly, money arrived that needed more management skill than I could provide, I turned to a professional and applied the necessary due diligence in selecting him. Not only did I follow up on all references, but I also had some experience of brokerage firms from my days in the Canadian feature film industry when Initial Public Offerings (IPOs) were a popular financing vehicle. All those I interviewed were investment dealers retained by major chartered banks. In Canada, this meant Scotia McLeod, TD Securities, RBC Dominion Securities, CIBC Wood Gundy, and BMO Nesbitt Securities.

Most offered proprietary packages with formulaic asset allocations, leaving me wondering if, once invested, anyone would ever look at my portfolio again. I finally chose the broker who offered a custom package and who specialized in conservative portfolios for seniors. I also liked him; there seemed to be a healthy chemistry between us.

Mostly, though, the markets were doing fine. My broker navigated the 2002 dip after which any asset allocation would have worked. By 2005, the stock market was fully off and running. A 20 percent annual return was *de rigueur*.

The first intrusions on my feelings of competence and complacency arrived in February 2008 when an acquaintance, now a good friend, offered cautionary advice. The markets, Montreal-based financial planner Louis DeSerres warned me, were very dangerous because of America's subprime mortgage crisis. As a newspaper columnist, I had written about this crisis: Canada's softwood lumber industry, in particular, was hurting because American housing construction had slowed; in addition, taxpayers in Europe were already on the line for propping up banks exposed to toxic subprime mortgages. Though appropriately outraged on behalf of taxpayers, I never made the leap to the implications for my investments. These finally hit home in mid summer when a precipitous decline in the markets also hit. My large institutional brokerage firm, in numerous mailings on the subject, exhorted clients to stay the course. This, it explained, would be another 1987-style decline, a correction, with the concomitant bounce back, stronger than ever. In any case, I wondered,

clutching at straws, would I not just lock in my losses if I sold now? What was a 1987 correction?

By November, feelings of mounting dread and high anxiety could barely be contained. My mutual funds were the first to go. Briefly, I flirted with the idea of buying some gold and General Electric, which was scraping unheard-of low levels, but I lacked the knowledge and confidence to act. Warren Buffett was buying, but perhaps he was just being patriotic. Instead, I sold fixed income instruments that were associated with banks abroad. By the end of November, I was out of equities and, for a day or two, felt relieved. Then, the markets started to rise out of their depths. Was the vaunted Santa Claus rally under way, or was this just a dead cat bounce? Would the incoming president, Barack Obama, bring his presidential honeymoon to the markets as well?

Now glued to the financial news networks, I never felt more alone. Never mind *feeling* alone. I *was* alone. Friends looked away or giggled nervously at the mention of the stock market. Were they in denial? It is true what they say about money. People are more willing to discuss their sex lives.

In the following months, I read voraciously and spent hours online and watching television commentary. Fundamental analysis. Technical analysis. Seasonal analysis. Analysis paralysis! I signed up for VectorVest, an online service that provides stock analysis and buy, sell, and hold advice. I bought books. I also got a grip and nibbled back into the markets, this time with a safety device I had just discovered called a stop-loss – a mechanism that allows the investor to automatically sell a stock when it drops to a certain specified level. I was as positive and upbeat as possible under the circumstances. My broker humoured me, but, when the market plummeted again in early March and I thought we should be buying, he decided I did not have the risk tolerance to be in. It was bad enough that I had lost a lot of money, but now my broker was zigging while I was zagging.

To be sure, our relationship had altered radically. Like a couple losing a child, each would feel personally responsible but also blame the other for the loss. In my case, the loss was doubly difficult to endure. The family inheritance consisted of assets built up by my mother and father. They were children, respectively, of Ukrainian and Polish immigrants who, at the turn of the twentieth century, acquired their citizenship by sweat equity: picking rocks and clearing bush to turn western Canada into one of the world's great agricultural regions. They did well on a farm property near Fort Saskatchewan – a small town situated south of Canada's oil sands operations where major oil refineries were building their facilities. Now I was losing not only my money but theirs

as well. When in March the markets veered upward, I bought in, judiciously following my self-styled Pac-Man strategy based on those corporations strong enough to survive the market devastation. But twice burned, twice shy. Would the markets plummet again? It was hard to follow through with conviction and particularly with the cash necessary to make serious returns.

What a failure! An otherwise competent woman was now losing her shirt in the stock market!

Emotional? You bet I was! No, I was not about to leap from some tall building, but it was clear I needed help.

The Die Was Cast

John Budden and I first spoke when I interviewed him for a column I was writing for the *Ottawa Citizen* about TransAlta, Canada's largest investor-owned utility company.

In July 2008, the Alberta-based power generator received a non-binding $7.8 billion (CAD) takeover bid from LS Power Equity Partners. Related to hedge fund Luminus Management LLC and Global Infrastructure Partners, LS Power was a joint venture of Credit Suisse and General Electric Company and it knew the value of a good utility. No strangers to successful takeovers, the multinational giants would nonetheless meet opposition on this attempt.

A venerable Canadian utility, TransAlta was founded in 1911[2] as Calgary Power by W. Max Aitken's Royal Securities. Aitken, later Lord Beaverbrook, had been a protégé and close friend of Budden's grandfather, John Fitzwilliam Stairs, founder of Royal Securities, from whom Aitken would ultimately assume control. John Fitzwilliam, in turn, was a member of the old and illustrious Stairs family – Merchant Princes,[3] as one biographer characterizes them – who would gain distinction in finance, ships, and steel, not to mention politics, at a time when Halifax, Nova Scotia, was still a crucial centre of Canadian commerce and trade. "They were Builders," Budden would later say, quietly implying the capital "B." In 1958, John's uncle Geoffrey Abbot Gaherty would help him get his first summer job working as a lineman at Calgary Power. Gaherty was a brilliant engineer and a visionary who, as the power company's president for thirty-two years, oversaw an era of unprecedented growth.

Thus imbued with the lore of Calgary Power, Budden knew that the bid of the "carpetbaggers" for TransAlta bore no relation to its underlying value. Ultimately, the bid failed, and all the private equity players retired from the fray but, for Budden, no garden-variety economic nationalist and already

a vociferous crusader against the hollowing out of corporate Canada, the proposed TransAlta transaction was personal, passionate, and authentic.

Budden's summer job at Calgary Power in 1958 was the beginning of a circuitous route into the investment business. In 1964, after a sojourn in Europe with stints at the Salzburger Hotelfachschule and the University of Grenoble, plus a lot of skiing along the way, Budden would be assisted by another uncle – Bill Budden, co-founder in 1947 of the renowned investment counselling firm McLean Budden – who opened the door to a Sales Trainee position in the London, England, offices of Dominion Securities Corporation. "In those days," John said, "if you were a male, had a recognizable family name, and were genetically unsound, you automatically got a job in the investment business." No amount of humility or humour, however, could disguise the fact that, from the moment he was born, the die, for John Budden, was cast.

Needless to say, in late 2008 and early 2009, as I listened to his daily market commentary on a local talk radio station, the last thing on my mind was this man's pedigree. Prior to that time, he'd been part of the kitchen background noise as I prepared dinner. Perhaps if I had paid closer attention I would have caught his warnings on the state of the markets – but now, better late than never, I was all eyes and ears to anything relevant to my investment situation.

At that time some sixty-plus years of age and with more than forty-five years of diverse international investment experience, Budden was known in Ottawa for his dressed-down manner and habit of holding court, iPhone or iPad ever ready, at an out-of-the-way coffee emporium. With the right hat and glasses, he might have resembled Elvis Costello. Instead, ever the perfect contrarian, he sported a preppy haircut and, in concession to the heat and humidity of a typical Ottawa summer, short pants. I quickly learned, too, that in addition to a Damon Runyon–like talent for quips, he also had excellent listening skills. Later, having learned that he had a mild form of dyslexia, I wondered if these were a form of compensation. Whatever the reason, now that he was no longer linked to institutional brokerages or establishment media, he was able to deliver the straightest goods possible in the plainest language possible about what was going on in the markets.

Eventually I would find that a more complete picture of the man was available at his website <www.JohnBudden.com>. Here visitors were greeted by the motto of Canada's legendary hockey star Wayne Gretzky, "Skate where the puck is going to be, not where it has been," and introduced to Budden's many "good friends" and "great legends." These distinguished Renaissance men are money managers, investment dealers, analysts, economists, and entrepreneurs

who are as comfortable discussing Friedrich Nietzsche and avant-garde movies as they are stock market analysis, commodity market capers, and the latest conspiracy and manipulation theories. More importantly, unlike most in the media, academe, or even institutional brokers who work for a salary and commissions, they make financial decisions every day while navigating the worst that governments and markets can deliver – often with copious amounts of their own skin in the game and, as John describes it, all the investment "scar tissue" that goes with it. On December 18, 2008, I bit the bullet and sent him an e-mail:

> Hi John.
>
> I am writing on a personal basis and as an unsophisticated investor.
>
> But firstly, many thanks for your excellent CFRA commentary and www.johnbudden.com, both now indispensable.
>
> I wonder if you could devote some commentary to bonds. There was a short spate of commentary recently referring to the "bond bubble." What does this mean and what does it mean for bondholders? I see your (portfolio recommendations contain) no bonds yet Jarislowsky[4] in yesterday's *Globe and Mail* is recommending cash and corporate bonds with "good spreads" for these deflationary times.
>
> Margret Kopala

And so began my friendship with John Budden. Acting on the premise that it was wiser to ask a stupid question than to make a stupid mistake, I also provided him with a yardstick of unsophisticated investment awareness that he could use for his radio show, all the while educating myself, with his help, about the challenges facing global economies and our portfolios. Ultimately, John and I would decide to write *The Dog Bone Portfolio* – a book that, under his guidance, details my growing awareness of what it means to be an investor in today's globalized world.

Writing in 2014, with the stock market approaching new highs, the investment climate remains vulnerable. Though in November 2008 George W. Bush drew attention to how the failures of financial institutions had led to sharp declines in the equity markets, over the intervening years we have witnessed a plethora of high-profile, near failures of nation states. Defaults by Greece, Ireland, and Portugal on their national debts were narrowly, and perhaps only temporarily, averted, while the outlook for Spain and Italy, not to mention several American states, worsened. The future of the European Union may be in jeopardy not only because of the potential for default or outright withdrawals but also because of a social and political backlash.

The picture in the U.S. is hardly better. Having set a limit (the debt ceiling) of $16.4 trillion on borrowing in order to avert a first-ever government default in 2011, only to reach that limit by December 31 in 2012, the U.S. government repeated the exercise at crisis pitch in October 2013. Still unresolved, the debt ceiling remained suspended until January 15, 2014. Sadly, as Budden puts it, the U.S. government has evolved into a giant manipulating hedge fund while its presidents, now including Barack Obama, are much better in the telling than the doing when it comes to matters of financial management. Many worry that a default on its debt, along with the loss of its world leadership role, is inevitable.

Most ominous is the threat of a "horrible economic crisis," as fund manager, author, and investment economist Marc Faber, based in Hong Kong and Chiang Mai, Thailand, sees it. It may be tomorrow, or it may be in ten years. As more and more money is printed, each dollar in our pocket or in the bank loses some of its ability to buy things. And if the economies of countries like China and India slow down, "commodities could drop," Faber warns, "causing a deflationary collapse."[5] In other words, the enormous debt of the U.S. government, among a growing number of other offenders, is a major concern. The greater the deficit and debt, the greater the devaluation of the currency, and the greater the likelihood of collapse.

Deflation? Devaluation? Collapse? What does all this mean? Having been wooed into the markets expecting my money would grow, only to be knocked down by significant portfolio losses in 2008, am I, like other investors, helplessly stuck in the midst of all this? Even today – as 2015 is well under way and markets have seemingly recovered – a sense of ominous gloom prevails. How can stock market gains possibly endure given the global economy's systemic problems? Is there any way not to lose our shirts?

My journey to financial literacy would be accompanied by another journey, too: call it citizen responsibility, if you will. After an extended period of high consumption, Western governments are exhorting their citizens to increase their savings and nail down their retirement plans, as if these were the sole components of financial literacy. Nowhere are they asking us to learn about the role of central banks, about how our banking system works, or about monetary policy. Yet when a presenter at a seminar I attended asked how many of the one hundred and fifty attendees had this knowledge, only five people raised their hands. As the reader will learn, however, these other economic elements play a profound role in the economies of their countries and, therefore, a profound role in our personal financial lives.

Mostly, though, *The Dog Bone Portfolio* is designed to help investors weather the market challenges that lie ahead. And because it is innovators, entrepreneurs, and investors who will lead the current economy out of its wintry trough into its spring phase, policy-makers, and academics, too, may find it useful. In this respect, John Budden has enlisted some of the finest market practitioners from around the world to contribute to *The Dog Bone Portfolio*. Before his death in December 2012, author, columnist, and former editor of *The Times* Lord William Rees-Mogg kindly granted a brief interview. For an institutional perspective, John spoke with Donald W. Lindsey, CFA, Chief Investment Officer, American Institutes for Research. A native of Demopolis, Alabama, and now resident in Singapore, Jim Rogers is renowned for his commodities trading. Dean LeBaron is an adventure capitalist and founder of Batterymarch Financial Management. Larry Jeddeloh is editor of *The Market Intelligence Report* and managing director and chief investment officer of TIS Group in Minneapolis. Author of *The Great Reflation*, J. Anthony Boeckh is an economist and lecturer; having built the renowned independent investment research firm The Bank Credit Analyst from 1968 to 2001, he is also President of Boeckh Investments Inc., a family office and private investment firm, and Chair of the Graham Boeckh Foundation. A world leader in precious metals investment and analysis, Eric Sprott founded the Canadian investment firm Sprott Asset Management, while Ian Gordon has studied, charted, and advanced investment strategies based on Kondratieff's long-wave cycle. Ronald-Peter Stöferle of Incrementum AG based in Liechtenstein is lead author of the renowned *In Gold We Trust*, an annual publication that provides rigorous and comprehensive analysis of the gold market. All suggest investment approaches and asset classes to help stabilize and secure portfolios as various crises unfold. We will also look at the history of the role played by gold and why that role is becoming more pronounced, even as our banking and monetary systems undergo greater scrutiny and comprehensive reforms.

With the help of the long-wave perspective and the skills of seasoned investment strategists, our goal is to provide insight into today's economic uncertainties and offer some equipment to help investors successfully weather the ongoing storms of this first Kondratieff Winter of the twenty-first century.

PART 1

Understanding the First Kondratieff Winter of the Twenty-First Century

Nikolai Kondratieff

1892 ~ 1938

ONE

An Economic Hero: Nikolai Kondratieff's Life and Work

If we judge by the passion it has aroused, the long wave is something of an economic historian's "Holy Grail."

–ANDREW TYLECOTE[1]

Through 2009, the markets moved up, but my portfolio remained in the dumps. I was preserving capital, but none of my strategies for making money were working. I signed on to an online advisory service that promised clear buy, sell, and hold signals and learned about stop-losses. These allowed me to set a price at which I could sell a stock before incurring unbearable losses, usually when it dropped 5 or 10 percent in value. True to the promise, these "stops" were preventing losses, but they also prevented gains if the stock then turned upward. This was particularly true when I was "whipsawed" out of a stock – a phenomenon that occurred regularly when investors with short positions on the stock sold, thus depressing the price to a point where it triggered my "sell" but, at the same time, someone else's "buy" order. Up the price would go, leaving me wondering if I should buy back in at the higher price. Additionally, after a certain number of such trades, fees became applicable. It was getting expensive just to pick up the phone to my broker. To regain losses from the 2008 crash, I was advised, it was necessary to be "fully invested" – that is, all my money had to be in the market, not sitting in cash – but the risk seemed to me to be untenable. Another option, my broker explained to me, was to buy "puts." A form of insurance against market losses, these would make money for me if the market dropped again; but this was far too exotic and potentially nerve-wracking for someone of my now extremely tender investment sensibilities. Now I would be betting not only on whether the market would go up but also whether it would go down. What a choice! Also, it was expensive.

By now, John Budden and I were in regular contact and lessons about how to navigate today's investment climate were under way. One, the most important, would take a very curious turn. "Understand the Big Picture, Budden urged. "That way your investments will make more sense." Then, literally breathing life into the lesson, John hit the books and started practising a Russian accent. Why? His good friend Dean LeBaron, the founder of Batterymarch Financial Management, an emerging markets investment pioneer, had invited him to portray the Russian economist Nikolai Kondratieff at the annual Contrary Opinion Forum in Vermont. The November 2008 crash was now history and viewed as yet another watershed period in the global economy though, even as the meltdowns were under way, the patrician New Englander and veteran market contrarian, LeBaron, was gamely attempting to divine the future.

I, too, was hitting the books, online commentary, and newspaper articles. One such article, entitled "The Twelve Steps to Financial Disaster,"[2] made a huge impression. It had been written in February 2008, well before the November crash, by Nouriel Roubini, a handsome, yet dour looking, economist whose thickly accented, rapid-fire pronouncements had earned him the title of Dr. Doom. As a specialist in credit crises, he had studied financial disasters as they occurred in Third World countries. Now, similar problems were infecting Western economies. "In this meltdown scenario, US and global financial markets will experience their most severe crisis in the last quarter of a century…" We "should be pessimistic about the ability of policy and financial authorities to manage and contain a crisis of this magnitude; thus, one should be prepared for the worst, i.e. a systemic financial crisis."[3] Unlike Roubini and a small handful of others, most economists and historians had spectacularly failed to anticipate the market fiasco. On the other hand, market practitioners like Lord William Rees-Mogg and James Dale Davidson had been predicting the arrival of a depression since the publication of *The Great Reckoning* in 1993. Already a fan of Rees-Mogg's columns in *The Times*, I also tracked down his 1974 book *The Reigning Error*, which would inform *The Dog Bone Portfolio*'s central theme and supply its opening quote. Others, too, like Robert Prechter in *Conquer the Crash* and Jim Rogers, who co-founded Quantum Fund, provided fair warning. Then, entirely by accident, I would find yet more impressive work. An online excerpt of a book about long-wave rhythms set me on a search for what appeared to be Ottawa's only copy of Brian J. L. Berry's *Long-Wave Rhythms in Economic Development and Political Behavior* – a comprehensive and scholarly overview of Kondratieff's long-wave theory written in 1991 by a distinguished British-American human geographer, now

Lloyd Viel Berkner regental professor at the University of Texas at Dallas. Back in 1991, Berry's treatment of long-wave theory made it obvious a depressionary event was inevitable.

While divergent in analysis and opinion, all were familiar with the cyclical nature of Western capitalist economies. And so, too, in the U.S., in November 2008, were Dean LeBaron; Walter Deemer, a renowned technical analyst; and Mark Ungewitter, Vice President and Gilded Portfolio manager at Charter Trust Co. Prominent in their paper, "A Way Forward,"[4] were references to Kondratieff, a victim of Stalin's purges, who laid foundations so important to cyclical economic thought that they found their way not only to Professor Berry at the University of Texas and William Rees-Mogg at *The Times* (and ultimately to the publishing house he chaired, Pickering & Chatto, which published Kondratieff's collected works in English) but also, much earlier, to Joseph Schumpeter at Harvard, Jay Forrester at MIT, and, later, in 2005, to a NATO-sponsored workshop on asymmetric warfare.

As a devoted father of four children, three of them daughters, Budden was intrigued and jumped at the chance to learn more about this man who cherished his own daughter from the confines of a prison. While many of Kondratieff's adherents believed he belonged in the economic lexicon alongside Adam Smith, Karl Marx, John Maynard Keynes, Ludwig von Mises, Friedrich Hayek, and Milton Friedman, for John Budden, once again, the issue was personal and passionate.

For me, learning about the life and work of Nikolai Kondratieff would provide insight into fundamental aspects of the global economy and the perspective I needed to understand the erratic nature of today's markets. In order to do this, however, I would first have to immerse myself in the sweep of Russian revolutionary history, where flesh and blood events commingled with the dry scholarship and intellectual passion of a true economic hero.

Kondratieff's Life

The great man is always representative either of existing forces or of forces which he helps to create by way of challenge to existing authority.

–E. H. CARR[5]

On August 31, 1938, Nikolai Dmitriyevich Kondratieff sent the following letter to his daughter Elena from the fourteenth-century Spaso-Yefimeyev Monastery in Suzdal, Russia, where he had been imprisoned since February 1932.[6]

> My sweet darling Alyonushka:
>
> Probably your holidays are over now and you are back at school. How did you spend the summer? Did you get stronger, put on weight, get tanned? I very much want to know. And I would like, very, very much to see you and kiss you many, many times. I still do not feel well, I am still ill. My sweet, Alyonushka, I want you not to get sick this winter. I also want you to study hard, as you did before. Read good books. Be a clever and a good little girl. Listen to your mother and never disappoint her. I would also be happy if you managed not to forget about me, your papa, altogether. Well, be healthy! Be happy! I kiss you without end.
>
> Your papa.

In the modest circumstances, relatively speaking, of a twenty-first-century credit crisis, a parent's love of a child is profound enough. Against the sweep of the Russian Revolution when you are your country's leading pro-market economist languishing in an isolation prison camp without having seen your child for some time, that love must have had a searing poignancy.

Given the times, such poignancy could not have been unusual. The history of the Russian Revolution, raised to contemporary consciousness by the pen of some of history's greatest writers, reveals how families were separated by the circumstances of World War I and the Revolution. Under Stalin, relatives were banished into exile. Millions were never seen again, brutally executed, or simply murdered. Russian history runs red with blood of other peoples, but among the first to pay the price of the revolution which destroyed the Tsarist autocracy, led to Civil War in 1918, and, eventually, to Stalin's Great Purge, were the Russian people themselves.

It did not start out that way. For a bright young Russian peasant testing his intellectual mettle, the first years of the twentieth century meant extraordinary opportunity.

The eldest of a family of ten, Nikolai Kondratieff was born in 1892 to a peasant family in a village in the Kineshma district north of Moscow. From prison, many years later, he would remember his rural upbringing as being difficult, because of the struggle to get ahead, but nevertheless sunny and carefree. "How inexpressibly wonderful my student years were," he recalled. "There was a kind of intoxication with life, a constant moving ahead, continual success, an almost pantheistic attitude."[7]

By the time of Kondratieff's birth in 1892, socialism was already a gathering force in Tsarist Russia. One of history's most influential and controversial

thinkers, the German philosopher and revolutionary socialist Karl Marx had published his *Communist Manifesto* in 1848 and, by 1894, all three volumes of *Das Kapital*. In 1887, Lenin's brother had been hanged for plotting the murder of Czar Alexander. In 1895, three years after Kondratieff was born, Lenin himself would be placed in solitary confinement and exiled to Siberia for three years. By the time of the 1905 Russian Revolution – ignited by Bloody Sunday and later quelled by Czar Nicolas II's October Manifesto promising civil liberties and an elected parliament – revolutionary forces had split into two camps. Among other distinguishing programs, the Socialist Revolutionary Party (SRP) favoured land socialization with tenant farmers working the land, while the Russian Social-Democratic Labour Party (itself split into Bolsheviks and the minority Mensheviks) believed the land should be nationalized. Thus attracted by the ideas of the moderate SRP and its peasant sympathies, the precocious fourteen-year-old Kondratieff was elected, in 1906, to a district committee. He then studied agriculture and horticulture at a local college before travelling to St. Petersburg where, having no money to pay tuition, his only hope of gaining entry to university was to pass exams without having attended the relevant lectures – a feat he readily accomplished with characteristic determination and brilliance. Following his admission, there was no looking back for the young soon-to-be professor. Tutors such as Maksim Maksimovitch Kovalevsky, a philosopher-positivist and Nobel peace prize nominee, economist Mikhail Ivanovich Tugan-Baranovsky, and sociologist-ethnographer Alexander Sergeevich Lappo-Danilevsky exposed Kondratieff to the finest scientific, economic, and sociological thinking of the time. In 1915, at the age of twenty-three, he published his first major paper – 446 pages in length – about the economic development of the Russian district where he was raised: "The Development of Kineshma zemstvo of Kostroma Juberniya: an Essay on Socio-economics and Finances."

By the time of the February Revolution in 1917, he was a keen activist within the SRP whose short-lived Provisional Government under Alexander Kerensky appointed the twenty-five-year-old Kondratieff deputy minister of food supplies. Later, he would play an influential role in the development of Lenin's New Economic Policy. In his home province, where the SRP was popular, he became a member of Russia's first Constituent Assembly. But, too late, the Constituent Assembly and the Provisional Government were routed by Lenin's Bolsheviks who assumed power in October 1917. By 1918, the one-time deputy food supply minister had split with the SRP and abandoned political questions to concentrate on abstract economic questions as a reader

at Moscow Shanyavsky University.[8] Later, he joined the Petrovsky Institute for Agricultural Economy where he focused on how shifts in government policy affected agricultural markets. More importantly, he laid the foundation for his own institute – one that would make a slow but an indelible mark on the development of world economic thought.

By October 1920, with Russia exhausted by both World War I and a civil war, Kondratieff created the Conjuncture Institute. Its five staff members would eventually number over fifty, and the work of the Institute would become part of an international phenomenon studying conjunctural and cyclical analysis – a pioneering discipline established to determine how market fluctuations and conditions can be predicted by studying the patterns created when significant events intersected or combined and so created "conjunctures." In the 1920s and 1930s other pioneers would include, in the U.S., Wesley Mitchell's National Bureau of Economic Research (NBER), which studied business cycles, as well as the Cambridge School of John Maynard Keynes and Dennis Robertson, the Austrian school of Ludwig von Mises and Friedrich Hayek, the Swedish school of Gunmar Myrdal and Erik Robert Lindahl, British economists Ralph George Hawtrey and Arthur Cecil Pigou, and the American economist Irving Fisher.[9] Kondratieff was now twenty-eight years old.

The upheavals of World War I had led, by the 1920s, to a sense of anticipation and capacity for achievement. Nowhere was this more evident than in the world of scientific and socio-economic endeavour. From Freud, to Marx, to Darwin, the intellectual world was alight with macro thinking. Who would discover the next Big Idea – the next overarching thesis that would explain it all? In Russia, the Revolution intensified the pressure to find and implement solutions. The Roaring Twenties were under way in the U.S., and the Western world was rapidly industrializing, yet Russia remained an economic backwater. The prospects and possibilities for creating a completely new economic order were exhilarating. Heroically, yet ultimately tragically for Russia and Nikolai Kondratieff, the battle for the ascendance of ideas was on.

Kondratieff's analytical skills would now move to a new theatre, this time with a global audience. As a prominent Russian economist heading up a major institute, he travelled with his new wife, Yevgenia, looking for all the world like an early Russian version of John F. Kennedy. In Britain, the U.S., and throughout Europe, he met economists of international repute, including John Maynard Keynes, Irving Fischer, and Wesley Mitchell whose Russian-American protégé (and, later, Nobel laureate), Simon Kuznets, would be among the first to translate some of Kondratieff's work into English. They

exchanged newsletters and joined one another's associations and societies. But where other institutes focused on one aspect or another of the business cycle, Kondratieff's Conjuncture Institute analysed economic conditions and price fluctuations in the U.S.S.R. and capitalist countries in order to solve issues of economic policy in the fledgling Communist system.

It was a tall assignment and one the Bolsheviks embraced, particularly if those cycles could reveal the flaws inherent in capitalism that would secure its demise. But in this, as in so much of Kondratieff's star-crossed political-academic life, the very issue that would secure his place in world economic thought would also lead to his ruin in Russia.

Kondratieff was already focused on Russia's economic and social problems, in particular farming and land issues. Food provision, too, would become a concern given the massive famines that existed during times of war and revolution. Looking to the interests of the peasantry, he supported some socialization of the land. Though it was inefficient, he considered it reasonable, particularly given the very low level of capital and material stocks in the country. And while steadfast in his conviction that local people should be given the freedom to decide what form of agriculture they thought most appropriate for their conditions,[10] ultimately grain marketability, labour productivity, and capital accumulation would become more important than ownership structure.[11] Later, as an agricultural economist and statistician, among his first criticisms of the Bolshevik regime was its role in the outbreak of famine and the disorganization of the economy. Throughout the 1920s, he argued that the productive forces of industry and agriculture were interconnected. Nonetheless, the Bolsheviks developed industry at the expense of agriculture whose forced collectivization, in 1929, Kondratieff opposed. By 1927, he was writing hard-hitting critiques of central planning, and agriculture in general, particularly from the perspective of prediction. In later years, his views would be applauded. "His analysis is brilliant," wrote Warren Joseph Samuels, a distinguished historian of economic thought, "though stopping short of Friedrich von Hayek's specific argument on the knowledge limitations and therefore impossibility of successful central planning, its strength derives from his attention to detail and absence of harsh ideological pronouncement."[12]

Taught by some of the leading scholars of his time in a multidisciplinary environment, he had learned the methodologies of statistics, economic investigation, and the social sciences. Particularly influential was Mikhail Ivanovich Tugan-Baranovsky, his tutor, a Ukrainian economist with whom he shared the view, not only that capitalism would not collapse but also that it was capable

of continuous development and that "crises" were its method of correcting problems.[13]

Crises within the seven- to eleven-year business cycle were Tugan-Baranovsky's area of specialization in which he demonstrated how the possibility of crisis grows out of the broken links between consumption and production. Kondratieff built on his tutor's thesis of "disproportionality" and became interested in identifying new, larger economic cycles and their interrelationships, an area that was also being studied by economist and business-cycle specialist Wesley Mitchell at New York's National Bureau of Economic Research.

With the Conjuncture Institute well on its way, Kondratieff published his first book at the age of thirty. "Many thanks are due to my wife," he wrote in his preface dated May 1, 1922, "who is my dearest friend. Her assistance in this work has been unfailing and extremely careful." Later, during his time in prison, the love of his life would become his lifeline to posterity.

Economics makes for difficult reading at the best of times, but understanding the complexities of virtuoso Russian analysis unevenly translated into English is nothing less than daunting. Still, I concluded, the effort was necessary. I was in an ocean thick with ideas that had been so massively extrapolated and interpreted (or distorted in the blogosphere) that I felt I had no choice but to paddle headlong against the current to obtain the core ideas. What follows therefore is a small sampling of the quality of Kondratieff's thinking concerning the nature of crisis, in this case, the extreme example of World War I. It was not difficult to see how this thinking might apply across a range of crises, including the kind of financial crisis we witnessed in 2008 and may yet see again.

The World Economy and Its Conjunctures During and After the War, written in 1922 and translated into English only in 2004, introduces Kondratieff's theory of crises and establishes the theoretical and statistical basis for long-term conjuncture of price fluctuations – that is, long wavelike cycles of about half a century in duration that illustrate a consistent pattern of economic expansion, crisis, and depression and their attendant social and political phenomena. Or, as I came to visualize it, a pattern out of which, in wave-like fashion, an economy gathers momentum, surges, crests, crashes, and disperses to become an "old" economy, even as a "new" economy emerges from under the "old" to repeat the pattern. Along with changes in the economy, social and political changes take place as well.

Where World War I was concerned, Kondratieff wrote in his introduction

that his purpose was not to provide an account of the world economy before, during, and after that war but rather to take the developments arising from this "grandiose socio-economic spontaneous experiment" that are "best characteristic and illustrative of the dynamics of conjunctures … and to try and realize to which extent these interactions and combinations can be described in terms of the current theory of dynamics."[14]

War illustrates the ultimate economic crisis where extremes of technological innovation and devastating losses coincide. "Crisis," he concluded, "is a painful reaction against disproportion, opened in the system, of elements in (the) national and the world economy, (leading to the) formation of (a) new, mobile balance of these elements. Therefore crises serve as a more general definition – of any advanced market economy. (Such crises) were, they are and they will be. Dreams concerning construction of a crisis-less economy are no more than illusion, self-deception."[15]

In other words, economic crisis – whether it takes the form of war or a market crash – is an extreme form of dislocation or disproportion of the elements surrounding the event indicating that something is terribly wrong in the system. Conjuncture, I further learned, is a general theory of the current economy with respect to the logic of small cycles, medium cycles, government policy, technological change, and political movements which coalesced to produce a certain point on the long wave. Or, in Kondratieff's words, the "totality and character of circumstances exerting an influence on the outcome of economic events."[16]

If long waves were to be Kondratieff's claim to fame outside Russia, inside Russia his primary influence would be as a prominent economist whose influence extended into several politburo committees. His assistance in helping to prepare Lenin's New Economic Policy enjoyed individual, if not always collective, favour.

But being pro-market and having a background in the Socialist Revolutionary Party, he was inevitably viewed with suspicion, if not as an outright political threat. As early as 1922, the first of the Russian show trials would take place, with forty-seven leading SRP members charged with conspiracy. As a man of great intellectual integrity and high moral rectitude, Kondratieff walked a very fine line where his political and academic pursuits were concerned.

Whatever influence Kondratieff had, it would end in 1925 with only lingering after-effects. Lenin died in 1924 and, with him, his New Economic Policy. Stalin's subsequent ascent to power brought with it a command

economy and a succession of Five-Year Plans in which alternatives, such as the market-led industrialization proposed by Kondratieff, could have no role. Steadfastly pro-market through 1928, Kondratieff lost the support of key political allies now consumed by full-scale central planning. His support of small-scale peasant agriculture, including that run by *kulaks*, the independent, relatively affluent farmer class, would eventually seal his fate.

In his authoritative overview of Kondratieff's life and work,[17] Vincent Barnett leaves little doubt that Stalin viewed Kondratieff – with his romantic peasant background, high ideals, and intellectual integrity – as a key opposition figure. Shrewdly, he acted to discredit and neutralize any effect or popularity Kondratieff might enjoy. This is hardly surprising since, according to Alexander Solzhenitsyn, the Soviet regime painted Kondratieff as a "future prime minister."[18] By 1929, the Conjuncture Institute no longer existed and, though Kondratieff continued to work, a resolution to strengthen the cadre of Marxist economists in the Communist Party assured his downfall. He was finally arrested in 1930, six months following full-scale collectivization of Soviet agriculture, including the liquidation of the *kulaks* as a class. By the end of that year, a propaganda campaign against *Kondrat'evshchina*, a derogatory term for supporters of Kondratieff, was in full swing. Along with agricultural economist Alexander Chayanov, an authority on the peasant farm economy, Kondratieff was labelled co-leader of the counter-revolutionary Kondratiev-Chayanov group and fictional Peasant Labour Party. Finally convicted of *kulak-professor* crimes in 1932, he was sentenced to eight years in an isolation prison camp.

Kondratieff may have wished that, like his colleagues from the Conjuncture Institute who lived to tell the tale, he, too, would have been sent to a Gulag to endure forced labour.[19] Instead, he was sent to Suzdal, where he would take up prison life in the Spaso-Evfimiev monastery – which now houses many museums, including one that exhibits many Kondratieff-related materials.

The saddest story ever to unfold about a famous economist would thus come to its tragic conclusion. Despite pleasant surroundings, reasonable food, and occasional visitors, Kondratieff was effectively in solitary confinement. Deprived of the necessary books and other materials with which to do his work, and despite fresh aspirations towards the study of pure mathematics, philosophy, and poetry, mental and physical decline were inevitable. The little work he was able to undertake during this period has been recovered, as well as the heartbreaking letters to his wife and young daughter. Despite numerous infirmities, including failing eyesight, he wrote stories for his daughter Elena

and provided her with a list of reading materials suitable to the education of a young and growing mind. He also composed music dedicated to his wife, Yevgenia. For a man whose sensibilities, in 1922, produced the following letters to his young wife, Stalin could not have chosen a more excruciating means of incarceration.

> … life has always held me in tension, my inquisitive look always staring at something before me; it has too much insisted on keeping me at the table, bowed intently over books and papers, without a single minute to spare. Mine was an intellectual happiness, and so was my grief. I came so far as to try and put beauty itself into the Procrustean bed of reason. Take it as you like, I had only one religion, that of intellect. That was added by the idea of social commitment – only to make this austere color that dominated my life even heavier.

And …

> Our home … now seems to me to have been converted into a hotbed of a profound happiness, promising to be a spring of our creative quest forever, not to be depleted by the everyday and prose of life. It is encounter with the highest manifestation of the beauty that makes us happy. Together we are going to enjoy the anguish and euphoria of intellectual elation.[20]

Despite being publicly discredited, then exiled and isolated for eight years, Kondratieff believed he could secure an early release and petitioned to this end. From his letters, it is apparent he was not aware of the barbarities to which the Soviet system had descended. Neither was he aware that, as early as 1930, Stalin had called for his execution. As Barnett suggests, Stalin did not underestimate Nikolai Kondratieff's importance. "As a true leader of the pro-market industrialization path for the USSR … Kondratieff had either to triumph or at least to face political annihilation."[21]

Barnett suggests the Great Man theory of history applies to Kondratieff: "The great man is always representative either of existing forces or forces which he helps to create by way of challenge to existing authority."[22] Barnett then laments how, without interference, American and Soviet economic theory might have developed on similar paths. We can only imagine, he says, the effect this would have had on the world's geopolitical arrangements and the role Kondratieff might have played in bridging the gap between market forces and central planning and between the world's soon-to-be most powerful nations, the U.S. and the U.S.S.R.

Whatever Stalin's earlier intentions, the last two years of Kondratieff's incarceration would fall during the Great Purge of 1936 to 1938 when 30,514 people were sentenced to execution directly, with estimates for the actual number of executions ranging between 680,000 and 1,000,000. On September 17, 1938,[23] Kondratieff was convicted by the Military collegium of the Supreme Court of the U.S.S.R and executed on the same day. Two months later, on November 17, 1938, Stalin ended the Great Purge.[24]

Kondratieff's Work

Kondratieff … gave both theoretical and statistical proof to the assumption that there are long term conjuncture fluctuations …

–YURIJ V. YAKOVETS[25]

Classical economics, that is, the school of modern economic thought developed through the eighteenth and early nineteenth centuries by Adam Smith, Jean Baptiste-Say, David Ricardo, Thomas Malthus, and John Stuart Mill, viewed cyclicality and crises as random events predicated on external factors such as war; however, by 1867 when Karl Marx published *Das Kapital*, a book that analysed crises extensively, theories about economic cycles were well under way. Among the first and still widely referenced of these cycles was the Juglar business or fixed investment cycle of seven to eleven years that was announced in 1860. According to British economist and world scholar on quantitative macroeconomic history Angus Maddison,[26] Clement Juglar's approach concentrated on monetary phenomena such as expansions and contractions in central bank activity and interest rates. Later, price indices and data on output and foreign trade were included while the Russian-Ukrainian economist and Kondratieff's tutor, Mikhail Tugan-Baranovsky, developed a more sophisticated causal analysis. Maddison credits the National Bureau of Economic Research (NBER) with the ultimate refinement in statistical analysis of business cycles. Founded in 1920 with Wesley Mitchell as its director, the largest economic research organization in America would, as early as 1926, see the publication of *Cyclical Fluctuations*, a study of cyclical variation in retail commerce, by Simon Kuznets. Born in Belarus, Kuznets studied economics at Ukraine's Kharkov Institute of Commerce and then emigrated in 1922 to the United States where he continued his work under Wesley Mitchell first at Columbia then at the NBER. By 1930 he had not only translated some of Kondratieff's papers into English[27] but had discovered his own, intermediate, twenty-five-year "Kuznets" cycles of investment in infrastructure and

housing based on demographic and immigration patterns. Later, he would win the Nobel prize for his work on the measurement of national income and economic growth (GDP). Meanwhile, and also in the 1920s, Joseph Kitchin had identified the inventory cycle lasting some forty months. Thus situated in an economic context already active in cyclical analysis, Kondratieff's work on the long-wave cycle was a logical extension of the economic thinking of his time.

For our purposes, that is as investors, it is important to understand what Kondratieff's long wave is and what it is not. Like others investigating economic cyclicality in various aspects of the economic lives of various countries by using specific data points, discovery of the wave itself is the result of Kondratieff's work in assembling and charting statistical data involving the *price points* of commodities, interest rates, wages, etc., in the British, German, French, and American economies from the time of the Industrial Revolution. From the wave-like pattern that resulted, he developed his theories about the relationship or conjuncture between price points, expansion, crises, and depression.[28] With emphasis added, my description from the section on Kondratieff's Life above bears repeating: *Kondratieff's theory of crises … establishes the theoretical and statistical basis for long-term conjuncture of price fluctuations – that is, long wavelike cycles of about a half century in duration that reveal a consistent pattern of economic expansion, crisis and depression and their attendant social and political phenomena*. The term "conjuncture" might best be described as the nexus, juncture, or organic centre of social, economic, and political forces that are the always moving, always changing tipping points that drive history and human cycles. Together, the pattern created by different points of conjuncture, including crisis, is called the long cycle or wave;[29] the theoretical and statistical basis (particularly the fluctuations in inflation rates and prices) for this pattern is called long-wave theory.

One widely referenced graphic has been prepared by Ian Gordon's LongWaveGroup.com, an investment advisory firm specializing in long-wave analysis. Commencing at the beginning of the Industrial Revolution, it charts the course of four long waves;[30] for ease of reference, it is included at the beginning of this book. Though it is a very detailed modern chart that also includes information about the behaviour of bonds, the stock market, and gold and lists key wars, the first three long-wave dates, with some variations, are consistent with those identified by Kondratieff, Schumpeter, and other commentators – an overview of which is provided in Nathan H. Mager's *The Kondratieff Waves*,[31] published in 1987. According to Robert Bronson of Capital Markets

Research, the arrival of the Modern Policymaking Era in 1913,[32] the year in which the Federal Reserve System was established, has resulted in increased interventions and concomitant changes in the length of the Kondratieff Wave. This goes some way to explaining the differences of opinion about how and when the fourth wave would unfold, though, today, most scholars agree on its cresting point, namely the early '80s, and that the bursting of the dot-com bubble along with the onset of the War on Terror marked the onset of its downswing.

Kondratieff's long cycle was renamed the Kondratieff Wave by the one-time Austrian Minister of Finance and, later, Harvard economist Joseph A. Schumpeter. No fan of government intervention in the economy, which he felt would eventually destroy capitalism, Schumpeter argued that upsurges in innovation and entrepreneurial dynamism were the big factors driving the wave and that depressions were necessary to the capitalist process. This process, or the "creative destruction" that took place during depressions, meant old products, firms, and entrepreneurs would be replaced.[33] As such, he properly identified the long wave as a technological transition cycle – a term coined by University of Texas Professor Brian J. L. Berry and who, in 1991 and using American data modelled the fifty-six-year-long cycle as a clock with the cycle's troughs and peaks and associated reflationary/inflationary upwaves and disinflationary/deflationary downwaves.[34] Each long cycle, or wave, would eventually acquire a descriptive name predicated on the essential innovation(s) of its era. Schumpeter, for instance, named the first wave the Industrial Revolution Kondratieff (cotton textiles, iron, and steam power), while the second wave was called the Bourgeois Kondratieff (railroadization). His third wave was called Neomercantilist Kondratieff (electricity, automobiles, chemicals). He then divided each of his waves into four movements: Prosperity, Recession, Depression, and Revival.

It is my understanding that, more recently, sections of the wave have been divided into seasons by Robert Bronson, the American capital markets forecaster and investment advisor[35] I cite above. As you would expect, the upswing of the long wave comprises Spring (reflationary) and Summer (inflationary), while the downswing comprises Autumn (disinflationary) and Winter (deflationary). Hence the term "Kondratieff Winter," which should not be confused with seasonal references also used by other cycles theorists but that are not necessarily Kondratieff-related. Today, you will sometimes hear, or read, simple references to "The Kondratieff" or "The K-wave."

What long-wave theory is not is a prescription for when to buy and sell

specific stocks or other investments, though, as we will see, some asset classes are better than others for specific seasons. Nor does it mirror the stock market, which has its own trajectories, though inflationary bull runs, periods when the stock market soars as prices rise beyond the point where they are sustainable and then collapse, are characteristic of the Autumn (disinflationary) section of the long wave. We also know these as periods when large "bubbles" appear in the stock market. For instance, the 1920s produced bubbles in automotive and appliance stocks, and there was a dot-com bubble which burst in 2000. As Dean LeBaron, in reference to current market conditions, explained in 2009:

> It is not in any sense a precise tool; as K-waves go from one phase to another the pacing is not absolutely exact. But it is a helpful descriptive tool as to what kind of things you might be looking for when you think that you're at a shifting point from one very long-term phase to another. When you look at the chart, you can see that the financial markets are doing something unlike anything we have seen since the 1930s and that we are likely working our way down to a Kondratieff trough.… Just as the current decline is unlike the declines of the past 60 years, the ultimate bottom is not likely to resemble the bottoms of the past 60 years either … very few analysts using conventional tools, had any idea this crisis was coming. The long-term cycles we explored all have one thing in common: a message that the ultimate lows in this cycle may be considerably lower than November's scary lows. Based on the historical evidence, what's more, we are likely to experience either painful debt deflation or highly destructive monetary inflation – and perhaps both at the same time …
>
> The artful tool of the Kondratieff theory actually gives us guidance that the decline might last another five to ten years – or longer.[36]

Neither does Kondratieff's long wave explain why capitalist economies manifest themselves in waves the way they do – though Kondratieff and other economists make convincing attempts to do so. Respecting the original work, the following several paragraphs paraphrase the short academic paper about the long cycle that Kondratieff presented in 1926.[37]

In this paper, Kondratieff pointed out that various economists had recognized that economic crises during the nineteenth century were both periodic and organically inherent in the capitalist system. But crisis was only one phase of an entire capitalist cycle that consisted of three basic phases: upswing, crisis, and depression. The inevitable conclusion arising from this observation was that the only way to understand economic crisis was by studying all phases

of the cycle and not just the widely recognized small business cycles of seven to eleven years, nor those of three or three and a half years. Thus, Kondratieff explained, he became interested in a third type of cyclical fluctuation, namely long cycles.

As he further explained to his 1926 audience, there were difficulties investigating long cycles. First, long periods of observation were required but not too long – no further back in history than the beginning of the broad development of industrial capitalism. Second, data on the dynamics of economic conditions for the period from the late eighteenth century to the middle of the nineteenth was insufficient. In his analysis, Kondratieff would assemble and process data for Germany, France, Britain, and the U.S. for the period after the Industrial Revolution. Using statistical methodologies, he charted commodity prices, interest rates, nominal wages, foreign trade turnover, the production and consumption of coal, and the production of pig iron and lead, as well as other data such as private savings in banks in France. With the exception of cotton consumption in France, and wool and sugar production in the U.S., all exhibited the presence of long cycles. Despite difficulties in processing the data, Kondratieff was able to identify corresponding lengths of time between cycles for individual countries. Moreover, he revealed three rising waves of between forty-eight and fifty-five years in duration: the first starting around 1790, the second around 1844, and the third in the 1890s. He also established that these cycles were international in character, though peculiarities might apply in individual countries.[38]

In the development of long cycles, he discerned four empirical patterns that he felt were as important to characterizing them as to understanding them. As I have noted above, these empirical patterns, that is, patterns based on observation rather than theory, would eventually acquire seasonal names.

1. Upswing: The first empirical pattern emerges at the beginning of the upswing or rising wave of the cycle and involves changes to the basic conditions of society's economic life, usually in the techniques (or innovations) of production and exchange which have been preceded by inventions and discoveries made in the downswing. In addition, a change in the conditions of monetary circulation and an enlargement of the role played by new countries in the global economic life takes place. Thus, in the 1790s, the Industrial Revolution was well under way, especially in England, building on the many inventions and innovations of the previous period in the textile, chemical, metallurgical, and

communication industries. Additionally, the U.S. was taking its first steps into the world market. Likewise, from the 1840s, the period of the second rising wave, synergies around improvements to the steam locomotive, and invention of the turbine, Portland cement, telegraph, and sewing machines brought all of these innovations into wide use. The transformation in communications was profound, Kondratieff noted, and railroad and water transportation also grew rapidly. The role of the U.S. in world markets grew, as did the production of gold. The third rising wave of the 1890s was influenced by significant inventions in electricity, including Gramme's direct-current electric dynamo, the drill press, new methods of steel production, the Siemens electric locomotive, and the wireless telegraph. In fact, Kondratieff saw the developments in the chemical and electrical industries as a kind of second Industrial Revolution. Much in the way steam, in the first half of the nineteenth century, influenced economic life, so did electricity influence the second half. Notably, the beginning of the third long wave coincides with an increase in gold production, the establishment of a gold standard in several key economies, and the involvement of more countries such as Australia, Argentina, Chile, and Canada in world markets. With the qualification that he was dealing, not with the causes of the long cycle, but with describing its course, Kondratieff summarized these developments in the first empirical pattern of the long-wave cycle as follows:

> Before and during the beginning of the rising wave, we observe the broad application of these inventions in the sphere of industrial practice due to the reorganization of production relations. The beginning of the long cycles usually coincides with an expansion of the orbit of worldwide economic relations. Finally, the beginnings of the last two cycles were preceded by major changes in the production of precious metals and in monetary circulation.[39]

2. Crisis: The main characteristic of the second empirical pattern, the rising wave of the long cycle, is significant social upheaval and radical changes in the life of the society. For instance, the rising wave of the first long cycle witnessed the Declaration of Independence in the U.S. on July 4, 1776, while 1789 brought revolution in France. Similarly, the rising wave of the second long cycle, in the 1840s, saw the Civil War in the U.S. and revolutionary movements throughout Europe. During the rising wave of the third long cycle, in the 1890s, there were conflicts

between Japan and Russia and Japan and China, the Spanish-American War, the Anglo-Boer War, the Russian Revolution of 1905 (in which the czar was forced to give power to the Duma, as opposed to the 1917 Revolution caused largely by the collapse of the Russian army in World War I), and so on.

3. Downswing: The third empirical pattern, that is, the downward wave of the long cycle, is characterized by a prolonged and marked depression in agriculture, which is far less agile in responding to depressed market conditions than industry is. For the period 1815–1849, following the Napoleonic wars, the price of agricultural commodities dropped sharply as did the prices of industrial goods. The depression that took place in the 1870s affected the U.S. and major European countries and was again reflected, not only in the prices of agricultural commodities but also in the fact that special parliamentary commissions were appointed to determine the causes of the depression and find measures to combat it. Though Kondratieff died before he could analyse the Great Depression, it was likewise characterized by falling, notably agricultural, asset prices.

Kondratieff's description of the beginning of the first empirical pattern, that is the beginning of the upswing, provides more clues into the nature of the Kondratieff Winter. A crisis having caused depression, industrial innovations languish at the margins awaiting the rearrangement of production relations that will spur their implementation and, concomitantly, the next upswing. In the meantime, capital goods – civic and industrial infrastructure – rust out and decline. Similarly, world economic relations are stagnant or in decline. Changes in the production of precious metals and in monetary circulation are also under way.

4. Intermediate Cycles. Today, Kondratieff's fourth empirical pattern attracts little attention, largely because its components have been studied and renamed for other economists, two of whose cycles – Clement Juglar's seven- to eleven-year capital investment cycle (1862) and Joseph Kitchin's three- to five-year information time lags affecting business decisions (1920s) – were subsequently assembled in K-wave models produced by Schumpeter (who apparently did not recognize Kuznets' fifteen- to twenty-five-year building cycle!).[40] That is, by superimposing six nine-year Juglar cycles and an indeterminate number of four-year Kitchin cycles over the fifty-four-year Kondratieff cycle, Schumpeter was able to create one composite wave.[41]

Kondratieff, however, simply referred to these patterns as the "intermediate cycles," which, he explained, were strung along the long wave, amplifying its upward and then downward trajectories. Ironically, it would be Simon Kuznets who, separating growth factors and involving population increases and infrastructure building from Kondratieff's price factors, would provide the evidence of those amplifying effects – full confirmation of which was published by Professor Berry at the University of Texas in 1991. Were these empirical patterns mere random occurrences? Kondratieff argued that innovations and their practical applications are a function of demand and, therefore, a part of the rhythmical process of long cycles. As for wars and revolutions, these are not the result of arbitrary acts by persons, but the direct result of real, especially economic, conditions. Similarly, social upheaval is most easily ignited by the impact of new economic forces while, historically, under capitalism, new territories become sources of raw materials and new markets for culturally older countries. It is not the existence of new countries that prompts the upswing in the long-wave cycle but rather the need and opportunity for old countries to exploit new ones. Finally, he determined that increased gold production, while relating to a rise in commodity prices and economic conditions generally, is itself subordinate to the rhythm of the long cycle.

Kondratieff admitted to difficulties in formulating explanations and causes for the existence of long-wave cycles in capitalist economies. At the end of his 1926 paper, however, he offered a "first hypothesis," which I summarize as follows: Long cycles are caused by the accumulation and diffusion of capital sufficient to create new production. Secondary factors may strengthen the long cycles, but it is capital and profit-making production that first and foremost drive the cycle. The upswing of the cycle "*coincides with that moment when the accumulation of capital reaches a point of intensity at which it becomes possible profitably to invest … with a view to the creation of basic productive forces and the radical re-equipment of technics*"[42](emphasis added).

In other words, make-work projects do not suffice for the purpose of stimulating the upswing. Only those projects, usually employing radical new technologies and/or new ways of organizing production relations that attract profitable investment, will provide the necessary stimulus.

As economic life picks up pace, Kondratieff continues, social struggle and the struggle for markets and external conflicts sharpen. Capital accumulation then weakens, causing a turning point in the rate of economic development followed by its deceleration or, using Kondratieff's word, its "ritardando." Though industry is most affected, the turning point usually coincides with

a prolonged depression in agriculture.[43] As economic life decelerates, it is accompanied by intensified research to improve technologies (or "technics," as Kondratieff called them). At the same time, there is an intensified effort to restore capital into the hands of industrial, financial, and other groups – often at the expense of agriculture. All this creates the conditions for the next upswing in the long cycle, which is again repeated, though at a new level of production.[44]

A subsequent article by Kondratieff, entitled "Price Dynamics of Industrial and Agricultural Goods" and published in 1928, is summarized by Barnett as follows:

> Kondratiev explained that the existence of the long cycle was connected to the mechanism of increasing the fund of basic capital goods. A period of increased construction of these capital goods coincided with the rising wave of the long cycle, and the period of the abatement of this construction coincided with the falling wave of the long cycle. The creation of basic capital goods such as large construction projects, land improvement schemes, and the training of cadres of qualified labour demanded the outlay of huge amounts of capital which required a series of preconditions as follows: (1) a high intensity of savings; (2) relative abundance of supply of cheap loan capital; (3) the accumulation of capital in the hands of powerful financial and entrepreneurial centres; and (4) low commodity prices, which stimulated savings. The low price level which was found at the beginning of the upturn of a long cycle was accompanied by a relatively high purchasing power of gold, which acted to stimulate the mining of gold.[45]

"This type of analysis," Barnett writes, "is about as detailed as Kondratiev ever gave in terms of providing a theoretical explanation of long cycles."[46] Even so, and as we will observe from the studies in long-wave theory that follow, Kondratieff's analysis that the production of capital goods that can attract profitable investment is foundational to the upswing economy cannot be overstated, though even these cannot perform their proper function in the economy in the absence of high rates of savings or the reverse, in the presence of high levels of debt. Long-wave theory then states that, once under way, these capital goods will inevitably wear out, rust out, or run out. When a crisis point is reached, they will then go into abatement. This is how the long wave is created – by rising, peaking, abating, and finally troughing, or, in my preferred visual analogy, surging, cresting, crashing, and dispersing.

Such analysis provides us with some criteria by which to determine where we are in the economic cycle. Think about automobiles made by General Motors. Though not in itself a "capital good," a term which refers to goods which are used to produce consumer goods, automobiles, particularly those made by General Motors, were a runaway American success story made possible by key capital goods innovations and discoveries such as the assembly line, the internal combustion engine, as well as a surge in road construction and oil production. Yet GM had to accept massive amounts in bailout finances after the 2008 market calamity. Does it remain in crisis? Has it troughed? Or is it surging? Similarly, think about sovereign economies. Where are these in terms of savings, the cost of loan capital, amounts of accumulated capital, and commodity and gold prices?

Yet, if Kondratieff had so much to say about how the long wave behaved and why it behaved that way, perhaps more recent scholarship on long-wave theory would define it even more clearly.

Kondratieff's Fate

Prison … has put an end to my scientific work, and put a stop to it at the most critical and interesting time; the years are passing and my scientific plans are disintegrating and being scattered like sand.

–NIKOLAI KONDRATIEFF[47]

Socialist ideology and Stalin's totalitarian excesses were the overriding factors in Kondratieff's downfall. Had he lived a full life, the debate around his long cycle might have been fully joined and, with the Great Depression and World War II providing more statistical evidence, the long cycle might have been fully confirmed. This was not to be. Worse, as economist and prolific author Mark Skousen notes, "the most traumatic economic event of the twentieth century" was giving rise to its own cadre of Communist apologists and sympathizers in the West. During the Great Depression of the 1930s, the most influential of these extolled the Potemkin village model of the Soviet system. In Western economies, where half the commercial banks were failing, unemployment soared to 25 percent, and stocks lost 88 percent of their value,[48] the Potemkin village would have looked pretty good. Some, such as Sydney and Beatrice Webb, economists and social reformers who co-founded the London School of Economics and were charter members of the Fabian Society – the pre-eminent political-intellectual group of Edwardian times – became full converts to Stalin's "new civilization."

Was socialism the only alternative to an unstable capitalist system? No, retorted British economist John Maynard Keynes. In 1936, while Kondratieff was languishing in the Suzdal monastery, Keynes's magnum opus spelled out that alternative. *The General Theory of Employment, Interest and Money* allowed for the inherent instability of capitalism and its failure to provide full employment. But rather than nationalize the economy or tinker with the fundamentals of supply and demand, Keynes called for government deficit spending on public works until – and only until – the full employment necessary for prosperity and with it capitalism was restored.

Thanks to Keynes, Kondratieff and his theories about peaks, and troughs, and crises, and depressions, were unceremoniously pushed to the sidelines of history, at least by establishment thinkers. With a plethora of tools – now foremost among them, deficit spending – central banks and governments could hope to "stabilize" inherently unstable economies and "smooth" out unruly wave patterns. Eight years after Keynes's *General Theory* was published, the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (IBRD or World Bank) would also become weapons in the arsenal against economic instability, this time in international monetary affairs and in the facilitation of world trade. Both were established at the United Nations Monetary and Financial Conference held at Bretton Woods, New Hampshire, from July 1 to 22, 1944. Even so, the Black Monday stock market crash in 1987, the bursting of the dot-com bubble in 2000, and the recent crash of 2008 more than suggested such tools weren't all that effective after all. Could the worst effects of the "ritardando" of a cycle that could not be pushed to history's sidelines be "stabilized" without risking commensurately deeper and longer contractions – and perhaps collapse?

So far, in 2014, the "stabilizers" are having their way. This is hardly surprising given the mechanistic, linear interpretation – as some have called it – that has plagued economic thinking since Newton.[49] James Dale Davidson and Lord William Rees-Mogg in their 1993 work *The Great Reckoning* explain how our mechanical intuition works well because modern problem-solving in science and technology involves calculations in which relations are linear. But this has also given rise to an unconscious expectation that the economy is also a machine. "To make the mathematics work required that the economy be conceived in unrealistic ways … economists boldly announced they could control the economy in the same mechanical way that engineers control boilers. They imagined themselves fine-tuning variables like fiscal policy

to increase output, lower unemployment, and regulate inflation."[50] But like Kondratieff, now Davidson and Rees-Mogg were saying that economics is neither mechanical physics nor even a closed system. Rather it is a system of social, economic, and other interdependencies. When these were stable, interventions were successful. "But when they were not, even trivial changes in inputs could produce chaotically different outcomes. Hence the dismal record of economic forecasting, government economic management, and centrally planned economies."[51]

Today, computer technology will take us beyond the Newtonian universe to reveal the nonlinear ways in which reality is organized, Rees-Mogg and Davidson affirm. "This revolution will take generations, not centuries, and is bound to be accelerated by the coming economic and political shock of world depression."[52]

And what kind of realities will be revealed?

Davidson and Rees-Mogg have a high regard for long-wave theory. "Evidence that nonlinear dynamics permeate nature, with cause and effect operating in complex ways, gives credence to the view that there are patterns or cycles of history, including long-term economic cycles … in which world economic conditions fluctuate between prosperity and depression as great powers rise and fall."[53] In this regard, Kondratieff's long-wave thesis "is supported by evidence that shows how economic activity has varied substantially from one period to another. This evidence includes overlapping or connected cycles in prices, growth rates, product innovation, agriculture, industrial production, and real wages … Evidence of long waves is overlooked for the same reason that (primitive people) overlooked hints about the true nature of industrialism – because it does not fit into the received worldview."[54]

Long-wave theory is most often associated with a human life span of about fifty to sixty years. The theory goes that, by having one generation die out before the next can repeat its mistakes, a natural limit on institutional rigidity is achieved. Since today's generations are living longer, by this theory, the long wave will also be longer. Moreover, write Davidson and Rees-Mogg, economic depressions fit the rhythm of nature. The spectacular forest fires in Yellowstone Park, which occur every two hundred or three hundred years, are analogous to depressions in the economic cycle. And, much in the way large forest fires cannot be forestalled by putting out every little fire, economic policies that try to forestall bankruptcies and burgeoning debt may only increase the severity of the ultimate disturbance. "The mounds of debt paper issued by politicians in the leading countries, especially the U.S., may merely be littering

the understory of the economy with combustible material. When the spark is lit, it will produce a 'mighty flame.'"[55]

In yet another compelling analogy, Davidson and Rees-Mogg describe the difference between shuffling furniture in a room and shuffling organs in a live body. The first involves little risk, because no interdependence exists between the pieces of furniture. In the live body, however, every organ is attached. Shuffling one risks affecting all the others. Governments, unfortunately, treat the economy like a room full of furniture.

The fact that the economy is a complex system, they add, does not make many forms of government intervention any more likely to succeed. The holistic analysis implies that the costs of many interventions may be higher than previously thought because they spread a wider net of perverse consequences. Objectives such as increasing debt to prevent economic slumps are inherently self-defeating. They temporarily forestall an unwanted outcome, but only at the cost of exposing the system to a more spectacular crisis in the end.[56]

Little wonder, then, that John Budden insisted I look at the Big Picture. Or that, at times, he likes to say it is helpful "to view things from ten miles up." Looking at Marx, Kondratieff, Keynes, and the latest (and some say greatest) economist of the twentieth century – Milton Friedman – from such a height reveals huge differences of opinion about instability in the capitalist system. Marx believed its inherent instability would mean its ultimate collapse; Keynes (who also believed governments should pay down debt in good times) and Friedman believed its inherent instability could be addressed respectively by government deficit spending and monetary expansion, while Kondratieff believed its inherent instability would self-correct by undergoing cycles of expansion, crisis, and depression.

Though pushed to history's sidelines, Kondratieff's theory that capitalism had the capacity to pick itself up, dust itself off, and start all over again was bound to have some staying power. From its old home in a post-revolutionary Russian think tank, it would find its new home in the recesses of academe where some notable advances and refinements to long-wave theory remain ongoing.

The most famous of these appear in Joseph Schumpeter's two-volume study, published in 1939. In *Business Cycles*, he acknowledges the long-wave cycle and how Kondratieff "brought the phenomenon fully before the scientific community and who systematically analyzed all the material available to him on the assumption of the presence of a long wave, characteristic of

the capitalist process."[57] As we have seen, Schumpeter then used it to develop his own theory of creative destruction, explaining that capitalism never can be stationary and that the industrial process "incessantly revolutionizes the economic structure *from within, incessantly destroying the old one, incessantly creating a new one*."[58]

Even so, the Kondratieff Wave continues to be largely ignored by establishment economists[59] though new adherents with new explanations for long-wave cycles were apparent even before Davidson and Rees-Mogg called for a different approach to economic thinking. Not surprisingly, this feat would be accomplished not by a practising economist but by a human geographer. Having sparked geography's social scientific revolution to become the most cited geographer in urban and regional research in twenty-five years, Brian J. L. Berry commenced studies on long-wave dynamics and their relationships to macrohistorical phasing of economic development and political behaviour. In 1991, the book *Long-Wave Rhythms in Economic Development and Political Behavior* was published. Now founding dean of the School of Economic, Political and Policy Sciences at the University of Texas in Dallas, Berry had assembled, synthesized, and advanced modern thinking on Kondratieff's long wave. An observation that became central to my understanding of how the long wave behaves was his statement that "despite the differences of various analyst[s], what emerges … is the idea that the long-wave rhythms have something to do with the innovation and diffusion of major new transportation and energy technologies, with infrastructure development, and with collective behavior marked by lag and overshoot."[60] Later, Argentinian systems theorist Tessaleno C. Devezas's edited compilation of presentations at a NATO-sponsored conference on long-wave theory and war, including one by Berry, would add to Berry's findings.

Economic historian Walt Whitman Rostow, Berry wrote, looked at commodity price movements to find long-wave fluctuations resulting from the introduction of new technologies in housing and infrastructure and in international and domestic migration. Going one step further, Craig S. Volland argued that long waves "are caused by the growth of dominant technologies that strain the supply of natural resources upon which they are dependent" and the mechanism is rising commodity prices. Rostow, he said, did not take into account "the clear historical record of price and technology-induced substitution between key commodities, particularly primary energy sources."[61]

Perhaps it is Minnesota geographer John R. Borchert who, in 1967, spoke most compellingly to our time. Citing transportation technologies and energy

sources as the main influence on metropolitan evolution, he traced canal/water power transportation to its inflationary peak in 1864–1865, while railroad/coal peaked in 1919–1920, and oil/internal combustion engine peaked in 1981. As Brian Berry explains:

> What (this) reveals is that the life cycles of energy use and dominant transportation technology have common features. The initial innovation (i.e. the first commercial application) may occur long before widespread acceptance. With such acceptance, there then is a period of accelerating deployment, a turning point, and a period of decelerating deployment until peak development is achieved during an inflationary crisis. Retrenchment follows as substitute technologies take over. The time period between initial acceleration after one inflation crisis and peak deployment in the next is that of a single long wave. As Volland suggests, inflationary pressures on an old technology spark the growth of an alternative that diffuses until it, too, pressures resources and reaches the inflationary limits of its growth.[62]

Far from contradicting Kondratieff, these variations and extrapolations – including the information technology that Berry believes will reach its inflationary and market saturation peak somewhere around 2035–2040[63] – confirm Kondratieff's themes about the production of capital goods. Studies consistent with Kondratieff long-wave theory had already emerged, however, from the Massachusetts Institute of Technology, where Jay W. Forrester identified, in 1977, fifty-year long waves in the U.S. economy which consisted of three decades of investment, one decade of market saturation, and one decade of depression. Forrester concluded that sufficient causes for long waves are the long lifespan needed to change the production capacity of the capital sectors … [and] that each major expansion grows around a highly integrated and mutually supporting combination of technologies (particularly transport and energy) … the process culminates in excess debt and an overbuilding of the capital sectors, followed by depression. During the depression the excess capital is worn out and fully depreciated. Defaults and bankruptcies clean out the excess debt load. The long wave involves an overbuilding of the capital sectors. Their growth exceeds the capital output rate needed for long-term equilibrium to a point beyond that justified by the marginal productivity of capital. Finally, the over-expansion is ended by a great depression during which excess physical capital is physically worn out and is financially depreciated on the account books until the economic state has been set for a new era of rebuilding.[64]

Acknowledging the power of the Kondratieff cycle, Forrester also wrote

that "to the extent that monetary policy has any influence on the long wave, the principal effect may be to encourage upward overshoot at peaks with a corresponding steeper decline, as a consequence of expansionary monetary policy during the late stages of the long-wave economic boom."[65]

By 1980, Graham and Senge would argue that, during the depression or downswing, new inventions sitting on the sidelines would be implemented. From these, the next upwave would develop. George Ray (1980, 1983) said new energy sources were key.

All of which, Berry concludes, "points to the critical role played by innovation."[66] In this light, Schumpeter's innovation-wave theory of long cycles, with its emphasis on innovation clusters, hardly needs mentioning. Importantly, however, Forrester's work would confirm Karl Marx's argument that depressions, whose durations were determined by the efficiency life of machines, were caused mainly by the obsolescence of capital goods (or infrastructure, such as railways, bridges, and manufacturing plants.)[67] This concept was also fundamental to Kondratieff's thinking when he observed that long cycles corresponded to patterns found in the fund of basic capital goods: wear and tear, replacement, and increase.

But following Schumpeter and Forrester, it is Berry himself who most appropriately wears Kondratieff's mantle of long-wave theorist.[68] His interest in long-wave theory followed his move to Dallas where he has advanced the Kondratieff notion of conjuncture – that is, the nexus at which economic, social, and political forces intersect to produce the long waves identified by Kondratieff in the 1920s – only, this time, using American data.

Berry admits to having, at one time, viewed the topic with suspicion. Once provoked, however, his work revealed that there might be something to the long-wave idea, sufficiently so that in the introduction of his first book on the subject, *Long-Wave Rhythms in Economic Development and Political Behavior*, he observes how our lives appear to be ordered in highly complex, self-regulating fluctuations. Long waves, which introduce innovative change that develops, overshoots, saturates, and diffuses, are among these fluctuations, he writes. Failure to recognize this complexity means it will be repeated, even though today, with the benefit of digital technology, stabler alternatives are possible.[69]

Then, like a latter-day Kondratieff, Berry would devote twenty years of research into U.S. macro history to produce work demonstrating the existence of three 18.6-year Kuznets cycles nesting within one Kondratieff long wave[70] – the first cycle supporting the inflationary assent (and rising interest rates) of

the K-wave that culminates in a stagflation crisis, while the second Kuznets, following the stagflation crisis, triggers an epoch of deflationary growth acceleration (disinflation) that results in declining interest rates and finally collapses into a deflationary depression.[71] Attendant on each, he observes, "major stock market collapses have signaled the downturn from each Kuznets peak over the past 200 years."[72] Most importantly, he would show how the Kuznets (growth) and Kondratieff (price) cycles were separate yet "synchronized when they collapse, in concert, in deflationary depressions, as well as when prices spiral and growth collapses in stagflation crises."[73] As if to anticipate the demographic and money supply issues bedevilling the post-2008 economy, he cited the work of Milton Friedman and Anna Schwartz which determined that "money supply is an important causal variable in economic growth; at the level of the Kondratiev wave, money-supply variations pass directly into prices,"[74] and "deflationary growth epochs are periods in which 'baby bust' cohorts enter the labor market and the fertility rate increases; during inflationary growth epochs, single 'baby boom' cohorts enter the labor market and the fertility rate declines."[75] His work would also integrate politics, economics, and social developments. Along with the cycles resulting from the production and abatement of capital goods, studies from the early 1970s identified long waves in American political cycles, wars, and world leadership. His most important table,[76] produced in 1998, anticipated the fourth long-wave would trough "in the first decade of the new millennium,"[77] though, by 1995, he was studying the social impacts of economic development and concluded that in two hundred years of American macroeconomic development, eras of stagflation crisis and inflationary spirals were characterized by "high rates of technological change" and "profound economic restructuring." In each case, conservative, commercially oriented administrations concerned with stabilizing the money supply and stimulating growth – i.e., by promoting major infrastructure networks (canals, railroads, airways, and fibre optics) that supported private market forces – were in power. Each ended in deflationary/disinflationary troughs accompanied by major financial crises, followed by liberal administrations precipitating new democratic epochs (Jacksonian Democracy, early Reform, the New Deal …).

American history, Berry continued, has thus been an ongoing conversation between capitalism and democracy that is ineluctably intertwined with the dialectics of the long wave. Capitalism provides an arena within which surges of technologically driven growth transform and restructure economy and society, but also create new patterns of inequality. Democracy serves as an

arena for establishing institutions and policies that constrain economic development to more egalitarian ends.[78]

Reading this at a time when the U.S. was in the run-up to a presidential election was mind sizzling, to say the least. But Berry would go further still. Seizing the baton in the exploration of non-linear patterns, he was, by the year 2000, producing work that conjoined the U.S. inflation rate and the rate of economic growth with geophysical cyclicalities of 6, 9, 18 to 19, and 54 to 57 years, writing, "The implication for technological forecasting is profound: a geophysical pacemaker might well control the periodic reappearance of long-wave crises, and therefore, the clustering of the innovations that drive successive surges of technological change."[79]

Unlike Davidson and Rees-Mogg, who saw a revolution ahead as individuals use the digital age to protect themselves against government profligacy, Berry saw great promise in the ability of governments – with tools like Keynesian interventionism, long-wave theory, and digitization – to mitigate disaster within global economies. "This is the promise of the digital age: that the alternating swings of prosperity and despair can be dampened; that growth can be stabilized; that we can be more knowing about ourselves and produce a future that is free of the collective consequences of individual excess."[80]

But by the summer of 2010, the greatest experiment ever undertaken to kick-start global economies was under way. While many believed that the worst of the downturn was over, J. Anthony Boeckh, a circumspect Montreal-based wealth manager, renowned for his work with The Bank Credit Analyst, issued this warning:

> The U.S. government has thrown an avalanche of new money into the economy and the financial system. This is the Great Reflation, and its purpose is to pump new life into the economy after a near-death experience. The biggest financial crisis and recession since the 1930s created a black hole that was huge and frightening. It was caused by an implosion of the greatest credit and asset bubble in history, which nearly brought down the global banking system. The effort to reflate – pump air back into the balloon – has had to be on a scale at least as large as the bubble itself. It is an experiment never before attempted in the context of U.S. experience, and it will have consequences unlike anything seen before.[81]

Like Davidson and Rees-Mogg, Boeckh saw the potential for disaster ahead even as Berry saw hope. Which scenario would play out? How does an investor prepare, and is it possible to prepare for either eventuality?

As I worked on the *The Dog Bone Portfolio*, the answer to the second question became apparent. As for the first question, Kondratieff's long-wave theory made a great deal of sense to me. But if the global economy is in Kondratieff's "ritardando" Winter phase, I could not help wondering how, in contemporary terms, it got there. If Kondratieff and his disciples were correct, debt, inflationary peaks and crises, the abatement of capital goods, monetary events, and geopolitical unrest should be in evidence.

Peering into today's economic climate, such evidence would not be hard to find.

TWO

Consuming Too Much: The Debt Crisis

If you are wealthy enough to afford it, consider purchasing a property in Switzerland, such as a chalet or condo. This could be a valuable insurance against unrest and megapolitical breakdown.

–JAMES DALE DAVIDSON AND LORD WILLIAM REES-MOGG[1]

In 1968, student protest, often violent, challenged the Vietnam War, while the civil rights movement witnessed the assassinations of Robert Kennedy and Martin Luther King, Jr. In England, Enoch Powell warned of rivers of blood flooding British streets, while students were rioting in France and igniting bombs in Germany.

That same year, I graduated with a fine arts degree in theatre. My Grand Tour of Europe was under way. One destination was Czechoslovakia, where I hoped to meet Jiri Menzel, the director of the 1967 Academy Award–winning Best Foreign Language Film *Closely Watched Trains*. By then it was August, however, and Russian soldiers hastened an end both to my visit and the Prague Spring.

Surely such events suggested some kind of turning point in the Western political scheme of things? Yet few, as I recall, were thinking about safe havens. Hippy communes, maybe, but not *buying* safe havens. What I recall from my travels through Switzerland in 1968 is the pastoral scenery – picturesque mountains, rolling meadows and vales, and orderly cities. In 1968, John Budden was in Toronto, but having lived in Neuchatel in 1963, he was familiar with Switzerland's Teutonic character where obligatory military training provided old boys with networking opportunities. Though Switzerland was expensive, you always got good value, and quality, and banking secrecy was sacred. By 2012, Switzerland was back in the news as a safe haven – this time

for financial assets, as a safe currency play, and as possessing a burgeoning real estate market. More unsettling, however, word was creeping out that Swiss authorities were preparing for the onslaught of a different type of safe haven seeker – refugees from euro countries caught in the grip of a worsening financial crisis, including social – even violent – unrest.[2]

Brutal Markets

Indeed, we have just entered Act II of the crisis.

–GEORGE SOROS[3]

John Budden likes to talk about how his market observations and insights arrive ahead of the herd, that is, before everyone else (hence his former website www.BeEarly.com). All of his investment scar tissue, he says, is the result of years of exposure to brutal markets. So, during one of our early telephone conversations, as he rattled on about the Kondratieff Winter unfolding in a series of theatrical acts, I paid attention. Soon after, his good friend Larry Jeddeloh of TIS Group told Canada's *Financial Post* how the economic plot has developed so far and how the next several acts would unfold.[4] Then came billionaire investor George Soros with his observation that the collapse of the financial system was real, and the crisis was far from over. "Indeed," Soros said, "we have just entered Act II of the drama."

Soros, a multi-billion-dollar hedge-fund manager, had successfully bet against the British pound in 1992 and so proved the markets were stronger than the Bank of England. Now in his late seventies, he explained how the 2010 economy resembled that of the 1930s when budget deficits forced governments to cut spending even as economic recovery was at its weakest. In the spring of 2010, following concern that Greece's sovereign debt crisis could spread, the euro declined to a four-year low against the dollar which destroyed more than $4 trillion in the stock markets, while two trillion euros were needed to refinance Europe's debt-ridden nations. "When the financial markets started losing confidence in the credibility of sovereign debt, Greece and the euro have taken center stage, but the effects are liable to be felt worldwide,"[5] he told Bloomberg.

Larry Jeddeloh, the eloquent Midwesterner, urbane world traveller, and author of the popular daily *Market Intelligence Report*, endorsed the placement of the European sovereign debt crisis as Act II. The subprime mortgage crisis of 2008, Jeddeloh said, was Act I. Act III will be precipitated by Japan, and Act IV could follow with what he calls significant shifts in the political and

economic systems of developed countries, involving a lot of volatility. Finally, with laser-sharp focus, he added that, in Act V, with so much change under way in political-economic systems, economic stress could precipitate wars.

If this sounds familiar, it should. Kondratieff's long-wave theory describes just these kinds of events. Having started in 2000, the Kondratieff Winter is now in its second stage, Jeddeloh added. As a result, "much of what has happened is explainable and what will happen in terms of U.S. monetary policy, the dollar, the economy, interest rates and equities is discernible. So far, 'Winter,' a naturally occurring deflation/depression, is being fought tooth and nail by the most aggressive Fed policy in history and rampant government spending. This will not stop, for if it does stop, the U.S. economy, fed by cheap and abundant credit, will resume its natural deflationary course."[6]

Whether this Winter will last for another ten to twelve years or two or three is hard to tell. But Jeddeloh believes today's policies will be insufficient to generate real economic growth or to reflate the economy when the next downturn comes. And there is, he predicts, another downturn coming (perhaps in a few years) for the next credit event so far as the U.S. is concerned.[7] As for Europe, if Germany decides against footing the bill for massive bailouts of indebted European countries, he told John Budden during a radio interview, then the euro and, possibly, the European Union itself, will disintegrate. Devaluations of currencies would accelerate and be followed by money printing in the hope of keeping tourism and exports competitive. Greece came close to defaulting, but others are in the wings. And meanwhile, Spain has vast tracts of unsold real estate developments even as a boom was under way in Zurich and Geneva.

Indeed, on the very day in 2010 when conducted that interview with Larry Jeddeloh, General Electric bonds had been issued in two of the world's most stable currencies, Canadian dollars and Swiss francs, a clear sign, they both agreed, of a turning point where currencies are concerned.[8]

If sovereign European defaults are Act II, what about the rest of the play? How did Act I, the subprime mortgage crisis, make it to the stage and how might the other Acts play out?

If, like me, you missed key action points and plot connections as they were unfolding, the following may fill in some blanks. While the subprime mortgage crisis and the role played by Wall Street made headlines, as in all great dramas, considerable scene setting and, most importantly, subtext were also involved. If Kondratieff's long wave provides the plot line, the subtext-like points of conjuncture support and explain the ongoing action. And, along with action

points involving sovereign debt, subprime mortgage defaults, and financial crises, an amazing cast of characters play important roles, often in mysterious ways. There were the Lords of Finance who run our central banks, a Plunge Protection Team created by Executive Order to maintain orderly markets and investor confidence, and Fat Fingers and Algo players who use computerized systems to predetermine prices, timing, and quantities of stock purchases.[9] From the Four Horseman – General Motors, Fisher Body, Dupont, and Yellow Cab – of the 1920s stock exchange, to Black Swans, those unexpected, high-impact events that crash stock markets, and naked shorts that had nothing to do with intimate apparel, I would learn that conventional theatre had nothing on high finance!

As for me, I, too, would find myself feeling like a character in a drama. Like Alice in *Alice in Wonderland*, I tried to fathom the absurdities and excesses of today's financial system. And like Dorothy in *The Wonderful Wizard of Oz*, I would find myself on the Yellow Brick Road[10] that some believe symbolized the gold standard leading to an Emerald City of worthless greenback dollars. Mostly, though, the role that best described my experience was that of Miss Marple, Agatha Christie's legendary spinster detective. Questions about where the financial bodies were buried, why they were there, and whodunit would become my stock-in-trade. Nikolai Kondratieff warned that crisis is unavoidable. Emerging from the devastation of the 2008/2009 meltdown, have we seen the worst of the Kondratieff Winter, or is the worst yet to come? Wearing my Miss Marple hat, I set out to find the answer.

A Culture of Debt

Historically, it has never been possible to pay back all the debt after a long wave peak. It must be wiped out either by price deflation and default or by further currency depreciation, and ultimately the introduction of a new currency.

–JULIAN M. SNYDER[11]

Among the lessons I was learning was how governments deal with the shortfall they incur when they spend more than they are able to raise in tax revenue. We all understand some of their methods, but some took me by surprise. First, and most obviously, governments can simply raise taxes. Second, they can borrow the money. This means the government must assume debt, as bonds are sold to lenders, usually citizens like you and me, or sovereigns (such as Asian countries with large savings who were big buyers of U.S. Treasury Bonds), or funds

(like PIMCO, the world's largest bond fund), at specified rates of interest and with an undertaking that it will repay the debt on a given date. A third, and very drastic, option is to default on that debt, that is, not repay money owing to bondholders. Another option, the one that surprised me, is a less drastic form of the third, what many call a "soft default." By devaluing the currency, usually by printing more money, governments also decrease the value of – or "inflate away" – their debt. But it, too, could prove drastic and result in the replacement of the currency.

In their 2009 article "Dead Government Walking"[12] Eric Sprott and David Franklin argued that the U.S. government was on a trajectory to default on its debt because it would not be able to fund its forecasted budget deficits and unfunded Social Security and Medicare promises on top of its current debt obligations. Nowhere had this been made official, they wrote, but there was no doubt about the extent of their trajectory.

In a similar vein, David Walker, President and CEO of Peter G. Peterson Foundation and former U.S. Comptroller General, observed how "we suffer from fiscal cancer. It is growing within us. If we do not treat it will have catastrophic consequences."[13]

Significantly, both David Walker and Eric Sprott are chartered accountants who have distinguished themselves in other fields. Sprott, the highly respected Canadian billionaire and head of Sprott Asset Management, questioned how, with a projected deficit (the budgetary amount owed annually) of almost $9 trillion from 2009 to 2019, existing investors will be able to increase their bond purchases by 200 percent, while at the same time tax revenues from all sources would have to increase over 60 percent. Then there is the Federal Deposit Insurance Corporation, the American federal agency that guarantees deposits. It has run out of money because of all the bank failures it covered and now needs to borrow money, beyond the amount already available through prepaid fees, from the banks for which it provides insurance. "Does this not strike you as surreal?" Sprott and Walker asked. In another article – entitled "Is It All Just a Ponzi Scheme?" – they concluded that not only are investors not buying U.S. Treasuries but the Federal Reserve had created something called the Household Sector, a phantom entity that serves to balance its flow of funds. But in 2009, this entity had purchased thirty-five times more government debt than it did in 2008! So, in addition to the quantitative easing program – a program going back to the 1930s which allows central banks to purchase assets with money they have printed for the purpose and which the Fed had quite properly announced and made transparent[14] – the Fed, now somewhat

less transparently, was printing additional dollars to buy Treasuries as a means of faking the Treasury's ability to attract outside capital.[15]

American economist Laurence Kotlikoff was also observing how even the International Monetary Fund, a kind of international central bank to national central banks, had effectively pronounced the U.S. bankrupt in Section 6 of its July 2010 Selected Issues Paper: "The U.S. fiscal gap associated with today's federal fiscal policy is huge for plausible discount rates … closing the fiscal gap requires a permanent annual fiscal adjustment equal to about 14 percent of U.S. GDP." The fiscal gap, Kotlikoff explained, is the difference between projected spending and projected revenue in all future years. Think of it as the government's credit card bill, with each year's 14 percent of GDP its annual interest payments.

With seventy-eight million American baby boomers collecting Social Security, Medicare, and Medicaid benefits that, on average, exceed per-capita GDP when they retire, the annual costs of these entitlements will total about $4 trillion annually in today's dollars for a total fiscal gap of about $202 trillion – more than fifteen times official debt. Though the U.S. economy will be bigger in twenty years, it will not be big enough to handle these numbers year after year. Closing this gap means an immediate and permanent doubling of America's personal-income, corporate, and federal taxes, among other requirements. Like Sprott, Kotlikoff believes the U.S. has been running a massive Ponzi scheme not just recently but for six decades straight and, if it isn't remedied, it will stop, and in a very nasty manner. "The first possibility is massive benefit cuts visited on the baby boomers in retirement. The second is astronomical tax increases that leave the young with little incentive to work and save. And the third is the government simply printing vast quantities of money to cover its bills."[16] All three responses are likely, he concluded, with dramatic increases in poverty, taxes, interest rates, and consumer prices. Bond traders, once they realize the U.S. is in worse shape than Greece, will kick the U.S. down the road.

In a Ponzi scheme, investors are paid with their own money or money acquired from new investors, not from actual profits.

How did things get to this state of affairs?

In 2006, when *Empire of Debt* was published, the subprime mortgage crisis of 2008 was just a gleam in some short seller's eye.[17] Back then, co-authors William Bonner and Addison Wiggin, who also publish the contrarian newsletter *The Daily Reckoning*, did not know when the crisis would hit or how, but they knew it was imminent. They also knew that the American economy was

in a shambles of debt owed mostly to Asians who were working harder and saving more than profligate Americans. "The entire homeland economy now depends on the savings of poor people on the periphery to keep it from falling apart. Americans consume more than they earn. The difference is made up by the kindness of strangers – thrifty Asians whose savings glut is recycled into granite countertops and flat-screen TVs all over the United States."[18]

Despite George W. Bush's claim, on November 13, 2008, that Asian savers were to blame for the low interest rates that prompted American debt accumulation, America's debt problem can be traced to the end of World War I. Prior to that, the national debt was, by and large, paid down promptly. But in 1914, America became the supplier of arms and food to the world just as fading powers like Britain and France needed credit to finance their war effort. By the war's end in 1918, the groundwork was laid for the rise of totalitarian regimes in Italy and Germany in addition to the totalitarian regime in place in Russia. For the U.S., it was also a cue to take on the accoutrements and burdens of empire. The world, according to President Woodrow Wilson, would be made safe for democracy. The income to fund military campaigns, regulatory regimes, and domestic schemes would arrive in 1913 through a newly legislated national income tax, a federal reserve system that had the power to print money, and the centralized powers required to use these tools.

Then came the 1930s and Franklin Roosevelt's New Deal. Influenced by Keynesian theory, it was a prescription to get the economy moving out of the depths of the Great Depression. An unanticipated side effect, however, was how it seemed to replace the traditional virtues of thrift, independence, and self-reliance with a paternal central government. As Bonner and Wiggin put it: "People came to expect the state to take care of things at home; later, they would come to expect the American government to build a better world outside the homeland, too."[19]

Such expectations proved costly. No matter, the early advocates argued, since governments that borrow from their citizenry to finance their deficits in turn owe that money to the citizenry. Besides, they said, the government is not an individual. It can spend and borrow and not worry about bankruptcy. Easier said than done, however, since, in reality, the Americans would carry their own debt by themselves only into the post–World War II period.

By the mid-1980s, Vietnam, Social Security and Medicaid, the First Gulf War, and systemic trade deficits meant that the American federal deficit was greater than the gross national product of 158 out of 167 countries.[20] By the year 2000, U.S. government debt totalled $5.6 trillion. The war in Afghanistan,

a new drug benefit program, and a flood of cheap credit that induced spending in the housing and stock markets meant that, by 2007, U.S. debt reached $8.7 trillion, equaling 66 percent of GDP. As in post–World War II Britain, when large foreign borrowings from the U.S. gave America the power to dictate British policy in the Suez Canal Crisis,[21] today 44 percent of American debt is owned mostly by foreigners, this time the Chinese and Japanese.[22] For now, the Chinese need the U.S. market to sell their goods, while the U.S. needs the Chinese to hold its debt. But what happens to this symbiotic relationship once China establishes a robust internal economy?

This culture of debt was the backdrop to the subprime mortgage crisis. If a paternalistic government provides less incentive to save, a paternalistic government that mandates low interest rates and virtually no impediment to home ownership provides even less incentive to save. It was Schumpeter, the Harvard economist who built his "creative destruction" theory on K-wave theory, who observed that "any stimulus in excess of actual savings is a fraud."[23] A healthy economy is, after all, geared to produce for real demand. Moreover, the absence of savings has consequences: it results in less money to invest in new industries, which means lower productivity and wages and less money with which to make purchases. Unless, that is, debt is incurred. And so, with the blessing of successive administrations, both Democrat and Republican, and a co-operative Federal Reserve, Americans borrowed in order to buy houses and to invest in the stock market as well as to make purchases on their credit cards, a phenomenon that would be emulated in key economies elsewhere.

Of course the housing sector of the economy went through the roof. By maintaining artificially low interest rates, many argue, Federal Reserve Board Chairman Alan Greenspan turned the financial bubble that had burst in the tech stock collapse of 2000/2001 into an economic bubble, the forefront of which was housing. By 2005, half of all jobs were housing related as Americans bought, sold, remodelled, and flipped their way into a housing bubble which, in California alone, raised prices by $1.7 trillion. Everywhere people were buying houses they could not afford in the expectation they could sell them for more than they paid. In fact, one in five spent half their disposable income on housing.[24] Meanwhile, the Chinese were making things that Americans buy, but weren't buying the things Americans made. And how could they when, in the U.S., more shopping malls were being built than factories? In China, in 2005, only 42 percent of GDP was domestic consumption, while in the U.S., in 2008, 90 percent of GDP was mortgages.[25]

How would Nikolai Kondratieff react to this "disequilibrium" within the

economy? Would he be surprised? The global economy is, after all, in its "ritardando" – the Winter of its long-wave cycle – and, after 1987's Black Monday and the bursting of the dot-com bubble, the excess of the subprime mortgage crisis was just another ratchet on its way into the trough. When an artificially induced housing boom is accompanied by sharp increases in debt, the risk of a crisis is significantly elevated. With the cumulative real price increase between 1996 and 2006 at about 92 percent, the 2007 subprime mortgage crisis represented the biggest housing price boom since 1891.[26]

A healthy economy drives the housing market; instead, the U.S. housing market was driving the economy. Not that the Americans were alone. With the exception of Germany and Japan (whose own real estate market exploded in the 1980s), real estate had exploded in all the Western economies, Ireland and Spain in particular.[27]

And the stock market was hitting new highs.

As the financial meltdown began, millions of American homeowners found themselves with debt exceeding the value of their homes, although the implications for the stock market would not become apparent until the banking system was affected. It was not bad enough that individual banks were foreclosing on defaulting mortgagees and finding themselves short of the cash needed to meet the day-to-day needs of depositors, large investment houses in the U.S. and abroad were perilously exposed to securities built around the very mortgages that were now collapsing. Losses everywhere were staggering.

It was not the first time. As Nikolai Kondratieff explained in the 1920s, and Nouriel Roubini and Stephen Milner explained in 2010, economic crises are systemic, "hard wired into the capitalist genome."[28]

Consider Japan. In Japan's 1990 stock market crash, the Nikkei Dow dropped 49 percent, more than Wall Street lost in 1929. At the time, it was history's greatest asset bust, following hard upon its greatest asset boom. As Davidson and Rees-Mogg explain, speculation about Japan's capacity as an emerging power had been fuelled since the late 1970s when its auto and electronics industries became global leaders, producing massive profits, a soaring stock market, and unreal real estate prices. By 1985 such prices had become "expensive" and later would become so "extreme" that, at one point, a single prefecture of Tokyo was said to be worth more than all of Canada.

According to one story told by John Budden, if the Canadian Embassy in Tokyo had been sold in 1988, it would have paid down Canada's national debt. Purchased by Ambassador Sir Herbert Marler – a friend of Budden's mother and grandmother who, as guests at the Canadian Embassy, played bridge

with the Emperor's family – the embassy was gifted to Canada in the 1930s. Davidson and Rees-Mogg describe how this phenomenon became possible:

> In the classic assets mania, markets outrun any rational valuation based on yield or cash return. Stocks and properties come to sell at absurd prices on the expectation that they will appreciate to still more absurd prices. And they do. They defy gravity, moving from one lofty new high to another, month after month, year after year, long enough to lure otherwise prudent people into mortgaging their gains to reinvest in the inflated assets on margin. Before the market can top, everyone who could conceivably be drawn in must have already become a buyer. And debt levels supporting the asset prices must be many times higher than any that could conceivably be serviced out of the cash flow yielded by the investments themselves. Then comes the bust … (which) is then followed by a long wind-down period, interrupted by numerous suckers' rallies, which absorb cash from optimists expecting an early recovery.[29]

In 2008, the West delivered its own version of the Japanese assets mania and bust. We might look to Japan for other warnings, too, for today's global economy. Dylan Grice, at the time a member of Société Générale's Global Strategy Team, argued in 2010 that Japan's two Lost Decades had pushed the debt to GDP ratio to 200 percent,[30] a phenomenon made possible only because the Japanese, through their own savings, can afford to buy their own bonds and thus own their own debt. But, as the aging population produces less income and relies more on savings, it will no longer buy its country's bonds. Worse, it will shrink its own savings, a problem exacerbated by the costs, estimated to be $50 billion, of rebuilding after the 2011 earthquake. The Japanese government could sell to foreign investors, but could it afford to pay the yield that would be necessary to attract buyers without cutting into national expenditures? This means the Japanese government may have to redeem its holdings of U.S. Treasuries. As Japan is the second-largest holder, with $750 billion, or 10 percent, of the entire U.S. Treasury debt, Grice wrote, "This might very well precipitate other government funding crises. At the very least I would expect it to trigger an international bond market rout scary enough to spook all other asset classes … Maybe Japan's will be the crisis that wakes up the rest of the world."[31]

In 2010, the resurgence of a dynamic Japanese political leader, one who would invoke his own country's successful experiment with extraordinary fiscal and monetary stimulus during the 1930s, hardly seemed possible. Back

then, Japan devalued the yen by 40 percent and became the first country to emerge from the Great Depression. "Abenomics," a three-pronged attack on the two-decades-long deflationary spiral by Shinzo Abe, newly installed as prime minister in 2012, would similarly attempt to stimulate growth, increase inflation, and depreciate the yen.

We can speculate about a Japanese-style lost-decades future for the West, but one thing is certain: Twenty years after the Japanese market crash, the Nikkei Dow remained deflated by 70 percent while its "lost years" economy flatlined into a near-permanent "L" shape, a condition that would begin to shift only in early 2013 when Abenomics devalued the yen, thus creating benefits but also risks for itself and for the global economy of the sort that Dylan Grice had already suggested.

Unfortunately, like Japan in the 1990s, the U.S. has responded to its financial crisis by adding to its debt load. At the end of 2008, in the largest federal government bailout in U.S. history, the government committed $700 billion to address the credit crisis plus more than $100 billion in tax cuts and spending increases.[32] Like pouring the alcoholic another drink, as John Budden observed, the Fed doubled its balance sheet.

To the extent bailouts and stimulus spending had some effect, global economies did recover from the November 2008 and March 2009 lows. Yet, by early 2010, it was clear that, where once banks needed bailouts, at least a few European nations would also need bailouts.

That Greece, the cradle of Western civilization, should be at the centre of the eurozone sovereign debt crisis was exquisitely ironic. Early retirement benefits, the involvement of Goldman Sachs in accounting discrepancies, and the fact that Greece had defaulted on its debt four times since 1829[33] only exacerbated anxiety about the disease infecting Portugal, Italy, Ireland, Greece, and Spain – the PIIGS of Europe. Riots and protests greeted the austerity measures that Greece undertook in return for a historic bailout package from its European Union partners, International Monetary Fund, and unprecedented accommodative measures by the European Central Bank. Even so, economic growth is unlikely for the foreseeable future while unemployment is expected to peak at 14.8 percent. Meanwhile, the proportion of unemployed Greeks between fifteen and twenty-four reached 32 percent in early 2010.[34] By 2013, that number doubled, suggesting a brain drain that could leave Greece even more exposed.[35]

The picture in Spain was hardly better. As in Greece, social unrest is a factor in any attempt at reducing budget deficits, while a default or restructuring

could cripple the foreign banks that have loaned Spain money. Here, thirty-four of forty-five Spanish banks which funded Spain's unprecedented real estate boom entered into merger talks to offset losses from a market now in ruins. To give an idea of the extent of the problem, 1.5 million of 2.8 million homes were unsold, many of them in large estates. With European financial and economic systems so deeply connected, a zombified Spanish banking system has huge repercussions for the eurozone. Worse, as mentioned above, the jobless rate in Spain is almost 20 percent. During the summer of 2011, youth unemployment reached 45 percent.

Writing in his monthly newsletter, the late Murray Pollitt, a professional engineer and Toronto stock broker, observed:

> The economy is rather like an airplane. If the plane is zipping along at cruising speed, a mere touch to the controls will produce a useful change in altitude or direction, but if it is moving just above its stall speed, big pulls and pushes to the controls produce only a mushy response. So it is with the economy today, lurching along barely above the stall speed. Indeed, if (European Central Bank Chairman) Mr. Trichet et al. had not given the levers a mighty twist … Euroland may well have stalled, spiraled down out of control, crashed and burned.[36]

Despite heroic efforts to contain the debt crisis plaguing Europe's peripheral countries, many believe it is only a matter of time before a eurozone country precipitates the next crisis – a careening financial disaster with the U.S., overwhelmed by debt, the final domino to fall.

Intervention: A Two-edged Sword

Any great failure should force us to rethink fundamental ideas.

–ROBERT SKIDELSKY[37]

What all this demonstrated to me is that government intervention – from the New Deal and the Japanese crisis to Obama and EU bailouts – is a two-edged sword: Some argue that Roosevelt's New Deal worked, while others say increased production capacity, necessitated by World War II, finally brought the U.S. out of the Great Depression. On the other hand, others argue that Roosevelt's New Deal would have worked if greater stimulus – lower interest rates, increased government spending, bailouts, etc. – had been applied. Similarly, they argue, Japan's failure to correct its economic woes was a result of stimulus applied too late. And those same advocates of stimulus heaved a

sigh of relief when, after the dot-com bubble burst, markets once again rose, thanks to stimulus applied by the then Federal Reserve Board chairman Alan Greenspan. After stimulus that was too little and stimulus that was too late, surely the Goldilocks economy got it just right this time. But then along came 2008.

Determined to preserve banking institutions, liquidity, and employment figures, Federal Reserve chairman Ben Bernanke flooded the system with dollars in a massive bailout effort. Central bankers around the world followed suit, and a full-blown depression was narrowly averted. Or so we hoped. But was Bernanke, like Greenspan, simply delaying the inevitable? Never mind the costs in terms of creating additional debt and moral hazard (the concept that bailouts remove risk, which in turn encourages organizations and individuals to behave recklessly because they know the government will bail them out), the costs in personal losses are even more disturbing. The aftermath of a financial crisis, according to Reinhart and Rogoff in *This Time is Different*, whether in emerging markets or advanced economies, share three characteristics:

1. The asset market collapse is deep and prolonged with declines in housing prices over six years, and equity values over three-and-a-half years at 35 percent and 56 percent respectively.
2. Declines in output and employment are profound. (From the period of the Great Depression, countries took an average of ten years to restore output to 1929 levels.)
3. Government debt explodes, rising an average of 86 percent, the biggest driver being the collapse in tax revenues because of output contractions.[38]

"The synchronicity of the collapses in housing markets and employment appears unprecedented since the Great Depression," say Reinhart and Rogoff, regarding the current U.S. economic climate.[39]

Given the amount of employment that was tied to housing, such synchronicity was inevitable.

Today, investigations continue regarding the role played by Wall Street in the credit crisis of 2008, a condition caused, as Eric Sprott and David Walker argued, by a Ponzi scheme in which citizens, encouraged by their governments, were spending borrowed money instead of money they had earned.

But a larger question remained. Why, I wondered, could Americans not afford the goods and services they so clearly wanted and enjoyed? Why did governments put all those borrowed Asian savings into housing, and why were

citizens maxing out their mortgages and credit cards? In a country renowned for its work ethic and ingenuity, where was the productive capacity to support all that consumption and all those entitlements? Surely this was not just about excessive materialism and overreliance on a paternalistic system? Something else was going on here.

THREE

Producing Too Little: The Production Crisis

Clearly the U.S. (and world economies) have suffered the structural change, characterized by overexpansion, saturation, technological obsolescence, and poverty of new ideas, that defines the stage of depression of the (Kondratiev Cycle/ Structure). Of course, this structural change cannot be reversed by the simple linear policies of mainstream economists.

–KENYON B. DEGREENE[1]

Americans used credit to purchase goods because they did not have jobs or, if they did have jobs, they were poorly paid jobs. Public sector workers were doing well, but their salaries added to the national debt and, while facilitating productive capacity, did not add to it.

Fewer jobs and poorly paid jobs means lower tax revenues for government coffers. If government is unwilling to cut expenditures, it must also borrow in order to fund its programs.

Experts emphasize the existence of low interest rates and other policy incentives as the main factors influencing people's borrowing habits. But it seemed to me that joblessness, following from a period of high income and consumption levels and backstopped by rising house prices, was the main reason people incurred high levels of debt. How did I reach this conclusion?

An Increasingly Familiar Pattern

Nor is it only manufacturing employment that has suffered. Consider the countless hundreds of thousands of clerks and telephone operators, whose jobs were eliminated by voice mail and reference to the Internet. Few of these workers have been retrained for better jobs.

–KENYON B. DEGREENE[2]

We have already seen how the housing boom gave people a false sense of security, but few could have felt good about what was happening in the jobs market. While on the one hand, factory production had increased by about a third since 2002, on the other hand, employment had decreased by a third. As Adam Davidson in *The Atlantic* described it:

> Factories have replaced millions of workers with machines. Even if you know the rough outline of this story, looking at the Bureau of Labor Statistics data is still shocking. A historical chart of U.S. manufacturing employment shows steady growth from the end of the Depression until the early 1980s, when the number of jobs drops a little. Then things stay largely flat until about 1999. After that, the numbers simply collapse. In the 10 years ending in 2009, factories shed workers so fast that they erased almost all the gains of the previous 70 years; roughly one out of every three manufacturing jobs – about 6 million in total – disappeared. About as many people work in manufacturing now as did at the end of the Depression, even though the American population is more than twice as large today.[3]

Include service jobs and the numbers are even worse. According to Kenyon B. DeGreene of the University of California, between 1973 and 2006, the U.S. lost nearly ten million factory and myriad service jobs to downsizing, mechanization, outsourcing, and obsolescence. Even the technology sector, which led the stock market to its 2000 highs, lost steam as the dot-com bubble burst. DeGreene further explains that, thanks to globalization and Walmartization, that is, paying low wages in non-union shops, real wages declined about 25 percent and households maintained themselves only because women entered the workforce.[4]

And, in a pattern that is by now familiar to readers and that will be reprised in the chapter on the 'flationary crises, American production capacity was also peaking in the 1970s.

Theorists and scholars explain job losses of this magnitude in one of two ways. The first has to do with globalization and mechanization, which took place from the 1970s onward. But the second, production capacity, was under pressure prior to that and for reasons having to do the inexorable course of the long wave itself.

Globalization was premised on the idea that goods, services, and capital should flow freely among nations; it was also premised on the ideas of an early nineteenth-century English economist named David Ricardo, who argued that

countries specializing in areas of production strength would enjoy a "comparative advantage" when trading with other nations. These nations would, in turn, benefit from being able to buy more goods at lower prices.

But Ricardo never imagined that such trade would take place between countries with asymmetrical environmental, labour, and political conditions. Yet this is exactly what happened when globalization emerged as a major economic force in the second half of the twentieth century. In practice, Ricardo's ideas resulted in corporations beating a path to the sources, such as China and India, of the world's cheapest labour markets to produce their goods. Germany and Japan, which had retooled for the efficient production of quality goods after the devastation of World War II and could therefore compete on a level playing field, then picked up any remaining slack in the world's demands for manufactured goods. The U.S., on the other hand, which had neither retooled nor reorganized its labour relations, simply did not – indeed could not, ethically speaking – compete where it was up against conditions that involved the use of, say, child or prison labour. But it lost ground even against Germany and Japan where such conditions did not exist. Inevitably, American jobs disappeared, even though its standard of living, propped up by a booming but vulnerable housing market, would render it the most desirable market in the world.

This is the real story of how the U.S. lost its productive capacity, its jobs, and its credit rating. It involved systemic, what these days are called "structural," problems rather than the mere externalities, severe though they were, of popular trade and (as we will see in a later chapter) monetary theories.

For this second explanation of how Americans lost their jobs, it is important to consider how the key drivers in what Kondratieff called "technics" and what today's economists call "factors of production" – land, labour, capital, entrepreneurship, energy, and technology – were behaving during Kondratieff's third and fourth waves. Whether through the provision of civic and industrial infrastructure and plant equipment (capital goods), inspired entrepreneurship, inexpensive energy, or a motivated workforce, all support productive capacity by laying the foundation for the production of goods. Sales of such goods (consumer durables like cars) are critical to the health of a nation's economy. As I would learn, however, much as in the job situation, these factors of production too were under pressure and wearing out, rusting out, or running out.

Ominous Signs Aplenty

Long-wave rhythms have something to do with the innovation and diffusion of major new transportation and energy technologies, with infrastructure development, and with collective behavior marked by lag and overshoot.

–BRIAN J. L. BERRY[5]

Returning from Banff, Alberta, where his friend Jim Kinnear was holding an energy conference, John Budden buzzed with enthusiasm about the insights and quality of thinking on display. It was April 2011, the markets were doing nicely, and the U.S. government was flirting with the possibility of raising its debt ceiling. No one knew whether Ben Bernanke, chairman of the Federal Reserve Board, would initiate quantitative easing version 3 (QE3) in June – the program that was sending billions of newly minted dollars into … well, no one was quite sure where, or how quickly. The money was being printed, and the banks were borrowing, but it seemed to be stuck in the banks, or if it was getting out, it was not moving around the economy very quickly. Thus, what is called the "velocity of money" – money that's moving around, indicating life in the economic system – was becoming a major concern. Worse, many banks were borrowing this newly minted money and using it to buy Treasury bonds at a few basis points higher,[6] thus making money for themselves but none for the economy.

By April 2011, Middle East unrest and the previous year's blowout of British Petroleum's Maconda Deepwater Horizon in the Gulf of Mexico – where 6,700 ships and 45,000 people were needed to help in the cleanup[7] – were reminding us anew of the vulnerability of global oil supplies even as Japan's Fukushima Daiichi nuclear disaster in March raised new fears about nuclear energy as an alternative fuel.

Alberta's position as one of the world's leading energy producers had become crystal clear to me in 2008. Writing a newspaper column about a prototype carbon capture and storage (CCS) facility located in the southern part of Saskatchewan, a neighbouring province, I became intrigued by the fact the Middle East oil-producing giant, Saudi Aramco, was a little-known sponsor of the project. After all, CCS technology is designed to siphon carbon dioxide – the greenhouse gas believed to be responsible for global warming – into chasms deep underground, under the sea, or into absorptive materials. The Intergovernmental Panel on Climate Change had determined that CCS technology could reduce the world's large-scale greenhouse gas emissions created by electricity generation and industrial activity by 55 percent in this

century. Where $C0_2$ emissions and climate change were concerned, clearly CCS would be an important technology. But the Saudis are hardly renowned for their concern about $C0_2$ emissions, either worldwide or in their own country, where heavily subsidized oil is widely available and customers riot if prices at the pumps exceed $.50 a gallon.[8] Could it be, I wondered, that the interest of the oil-producing giant had more to do with the other use to which CCS is applied – namely as a device for obtaining every last drop of oil from every underground nook and cranny by pressurizing it to the surface? If so, this could lend only more credence to what is called Peak Oil theory.

Originating with American geophysicist Marion King Hubbert, who accurately predicted American oil production would peak between 1965 and 1970, Peak Oil theory describes how individual oil wells accelerate in production until reserves are half exhausted, at which point production peaks and then declines. Now widely applied to conventional global production, including the Middle East,[9] oil from these sources is expected to plateau by 2020 and peak by 2030. Unconventional sources of oil, on the other hand, such as those from the Alberta oil sands, deep-water drilling, oil shale, tight oil, and even natural gas had, by 2015, significantly changed that picture despite the environmental and other challenges they presented.

A world of declining conventional oil supplies is ominous enough, but only when considered in the context of oil's intimate relationship with the internal combustion engine is its full significance apparent. If the wheel is mankind's greatest invention, then the invention of the automated wheel would render its impact exponentially greater as the conquest of distance became an everyday occurrence for a huge – and still growing – number of people.

Consuming 90 percent of all oil production, the premier expression of the marriage between oil and internal combustion – the automobile – defined the American economy through two World Wars, the Great Depression, and a post–World War II boom that would peak only when the auto industry peaked during the Kondratieff Summer of 1978. Not coincidentally, this was only two years prior to 1980, the year in which manufacturing employment in America was peaking, plateauing, and, as David Adamson of *The Atlantic* described it, entering its decline. As well as having domestic repercussions, the internal combustion engine and oil would together create a whole new era that also had geopolitical repercussions.

Infernal Combustion

What was good for our country was good for General Motors – and vice versa … It goes with the welfare of the country.

–"ENGINE CHARLIE" WILSON, PRESIDENT, GENERAL MOTORS[10]

Sprouting from seeds – those "technics," or innovations, to which Kondratieff so frequently refers – planted during the descent of the second K-wave into its wintry trough – the internal combustion engine was unleashed on the world by Nikolaus Otto in 1876 and, by 1890, the German auto industry was born. Through the turn of the century, France and Germany, with engineering and entrepreneurial giants Gottlieb Daimler, Karl Benz, Armand Peugeot, and Louis Renault, were world leaders in automotive production,[11] challenging British production supremacy with innovations that overtook the seminal advancements in steam engine technology the British had made earlier in the century. Even more audacious than the Germans, by the early 1900s, with the Texas oil boom under way,[12] America's Ford Motor Company and General Motors had commenced a historic battle for market share on their side of the Atlantic. The post–Civil War era had been characterized by coal-fuelled railroad expansion; now, the oil-fuelled automobile became the dominant mode of transportation, changing the way people travelled and moved their goods.

Along with the automobile, another seminal "technic" of the era, electrification, too was changing how people lived and worked. Electric lighting meant longer working hours and, with all manner of new appliances, more production with less labour. Thomas Edison's invention was quickly adopted in Germany where Werner von Siemens and Emil Rathenau helped ensure that, by 1912, Berlin not only rivalled Chicago as a showcase for electricity but, much in the way it had beaten England to the punch on the internal combustion engine, now it literally outshone London as well.[13]

But it was assembly line mass production, Kondratieff's "reorganization of production relations," made possible by electrified automation that rendered the automobile affordable to the masses and laid the groundwork not only for the development of the consumer society but for the development of the nation itself. In 1916, the Federal Road Act provided millions of dollars for millions of miles of road construction until, in 1923, $1.5 billion was being spent annually for this purpose. During World War I, exports of munitions, food, and trucks to Europe tripled, prompting newly affluent Americans to purchase even more vehicles.[14] By 1921, these numbered 10.5 million; by 1930, almost 27 million. Now the largest industry in the U.S., surpassing even

steel, the auto industry employed 318,000 workers with another 3.1 million indirectly employed in the tin, iron, steel, plate glass, rubber, and hardwood industries that serviced or supplied it. Automobile manufacturing would account for almost a tenth of manufacturing wages and over a tenth of the value of manufactured goods. And when the markets commenced their fateful ascent into 1929, it was the Four Horsemen – General Motors, Fisher Body, Du Pont, and Yellow Cab – that led the way as Wall Street joked about the markets being "a product of General Motors."[15]

"The industry was possessed with a sense of destiny that the motor car was going to transform all of American life," a historian would later write.[16] It was just the beginning. In classic Kondratieff formation, just as the New Economy's technological driver, auto/oil, was ascending the third K-wave and approaching its shakeout period during the Kondratieff Autumn (1920–1929), the Old Economy's technological driver, railroad/coal/steam, with record passenger miles achieved in 1923, was diffusing into the general economy[17] to assume its place as, essentially, a utility.

The new industrial juggernaut would pause for the Kondratieff Winter that commenced in 1929 and carried through the Great Depression and World War II before resuming its dominance of the vibrant postwar American economy. From a high of $73 in 1929, GM stock fell to $8 in 1932. With sixteen million Americans unemployed and in no mood to buy new automobiles, layoffs in the auto industry would lead to a surge of union activity that established the United Auto Workers as a defining model for labour relations. The arrival of World War II would again render the automotive industry indomitable. By 1940, General Motors had undertaken $1.2 billion in defence work for the U.S., Great Britain, and Canada – a number that would swell to $12.3 billion by 1945. A GM executive, whose president then sat on the National Defense Advisory Commission, made the statement that "the nation that is able to produce the most effectively … is the one less vulnerable from attack."[18] Saginaw Steering and Frigidaire, divisions of GM, made machine guns, Oldsmobile turned out artillery shells, and Pontiac anti-aircraft guns. It was GM's "supreme moment" as mass production techniques, developed in the automobile industry, became a major factor in the ability of the Allies to win World War II.[19] Moreover, with the war effort sidelining car production and 4,000 cars hitting the scrap heap every day, pent-up domestic demand was bursting at the seams. This meant a further increase of 50 percent in production capacity.

This, then, was the foundation for the post–World War II boom in

automobile manufacturing. So ubiquitous was the internal combustion vehicle that GM would go out of its way to have public rail transit systems marginalized in order to put its buses on the road. Briefly, GM flirted with the idea of a small car. It even had a name – the Cadet – but it was shelved for the larger, sleeker Chevrolets, Buicks, Pontiacs, Oldsmobiles, and Cadillacs that were populating the freeways and the suburbs that the automobile helped create and where conspicuous consumption and two-car families would soon become the norm. By 1958, its fiftieth anniversary, GM was the world's largest manufacturer of automobiles.

As Nikolai Kondratieff, or even Karl Marx, might have predicted, it could not last. After about fifty years, wear and tear sets in. According to MIT professor J. W. Forrester, "each major expansion grows around a highly integrated and mutually supporting combination of technologies (particularly transportation and energy) … the process culminates in excess debt and an overbuilding of the capital sectors … (ending with) a great depression during which excess physical capital is physically worn out and is financially depreciated on the account books until the economic state has been set for a new era of rebuilding."[20]

Right on cue, in 2008, the edifice of highways and housing built around car manufacturing, with GM its iconic symbol, would come tumbling down – one hundred years after its inception and fifty years after GM had established itself as the leading auto manufacturer, though even in the 1950s problems were becoming apparent.

For one thing, small car imports were already putting a dent in sales. In 1956 alone, sales for Ford, GM, and Chrysler were down 15 percent while import sales doubled. The fantastic economic growth of the 1960s, when the boomer generation created whole new markets for everything, including powerful muscle cars, delayed the inevitable for General Motors, though increased union pressures, car safety issues, alcohol and drug problems among workers, design deficiencies, pollution, and anti-trust suits that the industry failed to address meant the writing about worn out production factors was on the wall. That it took 5,500 GM workers to create a vehicle Toyota could create with 2,000 workers did not help. Neither did the "I'm all right, Jack" attitude, mirrored in many parts of the U.S. economy, which led to the depletion of capital in the form of ideas and outsourcing without regard to the future vitality of American industry.[21]

To be sure, record-setting sales would continue to 1972 and beyond; GM produced nine million cars, half of all cars that were sold that year. Even so,

foreign cars claimed 20 percent of the market. Exposed because it had no product in the small-car market, GM refused to retool to compete in this end of the market, and this sounded another warning. Efforts to penetrate the Japanese market were repelled because of the poor workmanship in GM products. The coup de grâce arrived on October 19, 1973. An oil embargo, followed by the deposition of the Shah of Iran and the nationalization of Iran's oil fields in 1979, meant American drivers would learn the hard way that "miles per gallon were more important than miles per hour."[22]

At the time, one in seven American workers was in some way dependent on the internal combustion engine.[23] And, alarmingly, American oil production was peaking. Now, instead of sustaining a war effort as the automobile industry did in World War II, it would become the gaping maw that required two Bush presidencies to go to war, first in Kuwait, and then in Iraq – where as much as 10 percent of the earth's most easily accessed oil reserves remains untapped – in order to stabilize and secure oil supplies.[24]

Consigned to the rust belts of history, where the steel industry was also languishing, GM would add to the mounting tolls of the unemployed as, thanks to high oil prices and inflation, the American economy of the 1970s entered its first major recession since the Depression. A new economic phenomenon called "stagflation" gripped the nation. Trade agreements that allowed outsourcing to Third World countries where labour was cheaper than those in traditional U.S. industries certainly helped corporations while devaluation of the currency ostensibly helped local manufacturing by making exports cheaper to foreign buyers. Such efforts would prove to be in vain. By 2007, despite the brave new integrated world that "globalization" was creating and "competitive devaluations" that promoted exports, the first hybrid vehicle, the Prius, outsold the emblematic SUV, the Ford Explorer, and Toyota overtook GM as the world's largest car manufacturer.[25]

In November 2008, after the biggest market crash since the Great Depression, GM appeared before a U.S. Senate Banking Committee to request a bridge loan of $25 billion for the Big Three. The U.S. economy faced a catastrophic collapse, its CEO explained. "Three million jobs lost within the first year, U.S. personal income reduced by $150 billion, and a government tax loss of more the $156 billion over three years, not to mention the broader blow to consumer and business confidence."[26] For General Motors and Chrysler, it would be their third bailout. By 2009, the U.S. government had ownership stakes in GM and Chrysler, while bailing out GMAC and Chrysler Financial for a total cost of around $80 billion.[27]

Yet no one knew for sure whether these Horsemen were capable of producing vehicles consumers would buy. As a form of transportation, the automobile was entrenched, but as a driver within a superpower economy, questions inevitably appeared about whether its best days and, possibly those of the superpower, were gone. For the time being, though, jobs were on the line. Bailout mechanisms bought time to retire old corporate models in order to regroup and retool. In the concluding chapter of *The Chrome Colossus*, author and professor of journalism at USC Annenberg Ed Cray wrote:

> Once it was the toy of the wealthy, then a source of mobility for the more affluent, and finally a lifeway for Everyman. Now, in the ninth decade of the century, the automobile had become a trillion-dollar prison, locking the richest nation in the world into an economic structure from which it could not, and probably did not want to, escape … No nation had ever spent so much on a single transportation system. Perhaps no nation ever again would spend as much…. The automobile ruled the nation's economy and the motor vehicle's voracious appetite for fuel governed foreign policy.[28]

And in an economy so dependent on one sector, its contraction would also mean a contraction in employment, a development that was exacerbated not only by the wearing out of production factors but also by new theories that trumpeted the interests of the consumer over those of the productive sector, theories that would see their ultimate and catastrophic distortions, what Kondratieff called "disequilibrium," in high personal and sovereign debt levels and financially and legislatively engineered housing booms. Once busted, the housing boom too would leave massive numbers unemployed but, this time, too encumbered with personal debt to be able to take on more even if the banks and credit agencies had been willing to lend.

Our Energy Future

The epicentre of global oil supply remains a powder keg.

–AMBROSE EVANS-PRITCHARD[29]

If the American auto industry was both progenitor and victim of the crisis in worn-out production factors, its global counterpart would present a different story. In 2009, China became the largest car market in the world. Even GM, despite bailouts from American and Canadian taxpayers, expanded production capacity in China,[30] sufficient that, by 2011, it led annual global sales ahead of Toyota and Volkswagen.[31] Yet the challenges for the global industry

are no less daunting than those being navigated by the U.S., where questions about factors of production are surpassed by bigger questions about rapidly depleting and – increasingly, because of climate change and pollution concerns – unacceptable deployment of today's cheapest energy sources, namely easily accessed *conventional* oil and, where electricity is concerned, coal supplies.

In 1850, fossil fuels supplied 5 percent of the world's energy. By 1957, coal, oil, and natural gas supplied 93 percent. Even then, the author of these statistics, Admiral Hyman Rickover,[32] warned that fossil fuels might run out before 2050 and that the automobile might disappear. Defying the warnings, however, oil production today is five times greater than 1957, and supplies of fossil fuels generally remain in abundance thanks to technologies that make them more accessible or offer new ways of locating new sources. That's pretty impressive but, as Daniel Yergin, whose book *The Quest* provides a comprehensive overview of the global energy situation, asks, "Will resources be adequate not only to fuel today's $65 trillion global economy but also to fuel what might be a $130 trillion economy in just two decades? … to go from a world of almost one billion automobiles to a world of more than two billion cars?"[33]

Moreover, like the current explosion in automobile use in the developing world, world electricity consumption since 1980 has doubled and will probably double again by 2030. Just as it revolutionized the Western world at the turn of the twentieth century, this will change the everyday lives and productive capacity of vast numbers of people in the developing world, especially in tropical countries where air conditioning alone will make a huge difference in worker production. In the developing world, urbanization will drive demand. In the Western world, where infrastructure from gas pipelines to electrical grids to crumbling bridges and overpasses is showing its age, it will be the pervasive expansion of electronics. The cost of this new capacity, writes Yergin, is estimated at $14 trillion – a fantastic amount but a mere fraction of the $130 trillion projected value of the world economy in 2030. What kind of power plants will be built, he asks, and which energy source will fuel them?

James E. Rogers, the CEO of a coal-generated power company and now head of Duke Energy, the largest U.S. electric utility, was asking the same question. "Should we build clean coal plants? Should we build nuclear plants? Should we build natural gas? How much should we invest in wind or solar?"[34]

Currently, coal-generated electricity dominates in the world's most populous countries, China, the U.S., and India. Coal is the worst of the greenhouse gas emitters[35] and is also the most abundant, cheapest, and most easily accessed fuel. Various mixes of natural gas, hydro, and nuclear power comprise most

of the rest, though since Japan's Fukushima Daiichi nuclear disaster, the third since Three Mile Island and Chernobyl, the future of nuclear-generated electricity is on hold. Oil as a fuel in electrical generation in the U.S. is down to 1 percent. This is why increased electrical energy from renewables would have little impact on oil use, unless the world moved to electric cars or cars that use alternative fuels.

As Yergin argues, however, given new technologies and better understanding of how oil deposits can be accessed, not only are oil supplies not peaking but they also could increase by 20 percent by 2030.[36] Moreover, unconventional sources are adding to the bonanza. These include condensates from natural gas production, oil from offshore drilling, the Canadian oil sands, and, the newest kid on the block, "tight oil" – so called because it is locked inside various types of rock, such as shale. Not to be confused with "oil shale," which contains kerogen, an immature form of petroleum and which exists in fantastic amounts in the Rocky Mountains, "tight oil" is accessed by a controversial technology called "fracking" – hydraulic fracturing and horizontal drilling – and exists in considerable quantity in the Bakken fields of the North and South Dakotas, Montana, and Saskatchewan, as well as in newer fields. These are being discovered in sufficient number to make tight oil the great hope for energy independence in the U.S., provided environmental concerns regarding water contamination and earthquakes associated with fracking can be addressed.

Primarily associated with shale gas production, hydraulic fracturing was first used in the 1940s. Injecting pressurized water combined with sand and chemicals into shale rock formations creates pathways to release trapped natural gas (and oil). Horizontal drilling was added to the technique in 1999. By 2000, shale gas comprised 1 percent of the natural gas supply and by 2011 it was up to 25 percent. Within two decades, it could be 50 percent.[37] Second only to oil as an energy source, usage of natural gas at these levels is significant. Providing 25 percent of the nation's energy in the 1970s, by the 1990s natural gas was fuelling even electrical power.[38] Add the "shale gale," as Yergin describes it, and you have a true powerhouse proposition. And the shale gale isn't confined to North America. From the United Kingdom,[39] to Poland, China (which may have the largest reserves of all[40]), and Indonesia, it exists in massive quantities while natural gas developments in the Mediterranean, such as Israel's Leviathan Field, and the Arctic Circle, promise years of energy security.

In a report released in late 2011, the Organization of Petroleum Exporting

Countries (OPEC) agreed. Proposed pipelines transporting crude from Alberta into the U.S. and a quadrupling of non-conventional supplies led by the Canadian oil sands and U.S. shale oil over the next twenty-five years will transform the global crude trade outlook, it stated.[41] It also projected increases in oil production of 0.8 percent, renewables at 7.5 percent, biomass at 3.3 percent, and gas at 2 percent.

Still, there is no way of avoiding the fact that the Persian Gulf remains an important centre of both oil and natural gas production. Despite a Citigroup report arguing that Saudi Arabia could become a net oil importer by 2030,[42] with one fifth of global supply, the Gulf remains holder of the largest proven reserves of oil. Similarly, ownership by Qatar and Iran, respectively, of the world's largest natural gas field located in the Persian Gulf's North and South Fields, means there is no mistaking the economic clout of a region where global oil prices are determined at the twist of a spigot. Qatar's interest in the North Field, with 30 percent of the global natural gas trade, has made it the world's largest producer of liquefied natural gas (LNG), that is, gas that has been transformed into a liquid at very cold temperatures, which is then transported in large tankers.[43] Geopolitical upheaval with the arrival of the Arab Spring, Al Qaeda, ISIS, and Iranian designs on nuclear weapons has made it even more urgent to relieve dependency on Persian Gulf sources, particularly for a country like the U.S. that still imports large quantities of oil. As columnist Charles Krauthammer reminded his many readers, "Almost 60% of the U.S. trade deficit – $332 billion out of $560 billion – is shipped overseas to buy crude."[44] In August 2012, the *New York Times* reported that the U.S. was raising its imports from Saudi Arabia by more than 20 percent that year,[45] part of the problem being that old refineries on the Gulf of Mexico are designed to process heavier oils from Venezuela, Mexico, and Canada, not the high-quality sweet grades being produced by the shale oil fields.

Though Yergin appears hopeful that world energy demand will be met through some combination of fossil fuels, biofuels such as ethanol, and renewable energy such as wind, thermal, and solar, others remain unpersuaded, and even Yergin rarely projects beyond 2030, by which time the die for the remainder of the twenty-first-century energy picture will be cast. Will we like what we will see?

A Paucity of Straws in the Ground

… there is an inverse relationship between quantity and quality of reserves. Low quality deposits are more common than high quality. That's why peak oil means acceleration of the capital expenditure required to extract the marginal barrel of oil. From sticking a straw into the ground in Saudi Arabia to deep onshore wells to deep offshore to unconventional sources (e.g., heavy oil, bitumen/oilsands, pre-salt deposits under fantastic depths of water and rock), to vaguely oil (e.g., kerogen/oilshale, coal-to-oil). Rising prices drives this evolution. New technology for extraction and efficiency can mitigate but not prevent these price increases.

–FABIUS MAXIMUS[46]

According to former chief economist at the Canadian Imperial Bank of Commerce Jeff Rubin, high oil prices will produce a world that is a whole lot smaller where economic growth is nonexistent. High oil prices were responsible for the 2008 meltdown while the collapse of the housing market was a symptom, not a cause, he argued in 2012.[47] The real cause was lack of jobs and economic growth caused by high oil prices, a spike that pushed homeowners over the brink into defaulting on their mortgages. Renewable sources of energy have their place, he wrote, but they will not begin to offset high oil prices. The same thing goes for coal, which is running out. High prices are here to stay, and that means permanent global stagnation and the end of economic growth, so don't worry about global warming, he says. When the Soviet Union collapsed, emissions decreased by 30 percent.[48] The rest of us will reduce our share once it becomes too expensive to use our cars, or travel by air for vacations, or when it becomes impossible to buy increasingly expensive goods from around the world, which we will then have to make ourselves (good news, since this could fuel a domestic resurgence in manufacturing and jobs growth). While we're at it, we should start thinking "peak copper."[49] There's not enough to meet China's needs, never mind everyone else's. Rubin's bottom line? "World supply may continue to defy peak-oil predictions, but that's just a geological sideshow. What matters to the economy is the price it takes to get the new supply flowing … in other words, the only peak that matters is the one determined by what we can afford, not by how much we can drill."[50]

When you consider that the extraction cost of a barrel of oil from the Bakken and Eagle Ford shale deposits is as much as $75 while those from Saudi Arabia cost around $10, Rubin's message became only too apparent in

2015 when oil prices scraped the bottom of the barrel as the laws of supply and demand rendered their apparently inescapable verdict on even modest peak oil theories. Supply had increased by 3.9 mmb/d compared with demand growth of 2.9 mmb/d, most of it arising from American shale output which made up 71 percent of all non-OPEC production between 2011 and 2014.[51] Saudi Arabia's refusal to cut production unleashed no end of geopolitical conspiracy theories but the bottom line, namely that the Saudis could produce more oil more cheaply over a longer period of time than anyone else, meant that winning an all out price war was easily within their grasp with everything that meant for other oil-producing constituencies, including U.S. shale production.

And never mind shale extraction costs, there are environmental costs as well. Arthur Berman, of Labyrinth Consulting Services Inc., a presenter at the Kinnear Conference in April 2011, spelled it out. While shale gas resource volumes are large, costs are high and recovery efficiency is low, he told conference participants. Production is impressive, but most wells are not profitable. After several years of horizontal drilling, fewer than 6 percent of Barnett shale wells had reached or exceeded break-even production volumes, and only a core area of the advertised plays are contracted. Just to keep production flat, new wells must continually be drilled.

By 2013, a report from the American Geophysical Union confirmed that oil production from conventional sources was falling by 5 percent a year but that shale and oil sands oil were unlikely to meet the shortfall. And while fracking would improve America's economic and strategic prospects, it said, the depletion rate was so high even for the biggest, most successful fields, such as the Bakken in North Dakota, that supply overall wouldn't last much longer than twenty-three years![52] Bottom line: shale plays in the U.S. while productive in the short term are commercial failures and reserve forecasts are overstated in the longer term.

And indeed, by mid-2012, as Berman might have anticipated, several big players were exiting at least some of their shale gas plays, including Exxon from its Polish field, and BHP Billiton from its Arkansas Fayetteville field.[53] As Exxon-Mobil's chief executive Rex Tillerson observed about the $9.3 billion net loss that shale gas extraction companies had sustained in 2012, "We're losing our shirts!"[54] Why? Because the North American glut in conventional natural gas supplies meant low prices that could not finance continuing shale gas plays.[55]

Another problem facing the energy industry is the huge amount of water

that is required not only for the fracking process but also to cool coal plants and for storing heat generated by solar panels. The International Energy Agency 2012 World Outlook reports that this could be the biggest constraint on energy and power. With water yet another scarce resource and vulnerable to pollution, Ambrose Evans-Pritchard, *The Telegraph*'s cutting-edge analyst of the post-2008 economy, suggested that "water-adjusted GDP may yet become a vogue term."[56]

More bad news for natural gas, whatever its source, includes the fact that, after coal, it is the "other true climate change bad guy" and that the culprit is not, as everyone suspected, oil sands oil. According to Andrew Weaver, a University of Victoria climate modeller and lead author of two reports from the United Nations Intergovernmental Panel on Climate Change,

> when only commercially viable oil sands deposits are considered, the temperature increase is only .03 degrees C. In contrast … burning all the globe's vast coal deposits would create a 15-degree increase in temperature. Burning all the abundant natural gas would warm the planet by more than three degrees. Governments around the world have agreed to try to keep warming to two degrees. "The conventional and unconventional oil is not the problem with global warming," Weaver said. "The problem is coal and unconventional natural gas." … As well, there's so much gas in the world that it will also cause problems despite the fact it emits less carbon than oil.[57]

In fact, emissions are already on the rise. Methane, the main component of natural gas, is escaping not only from the Arctic Lakes' deep geological reservoirs now increasingly exposed by melting permafrost but also from leaky pipelines and gas wells.[58]

Berman concludes that, because we will be dependent on fossil fuels for a long time, we must learn to use them wisely – a view shared by Chris Martenson, a trained scientist turned contrarian economic commentator. Despite the doubling of expenditure on exploration and production and a tripling of the price of oil, global oil production has not budged. Shale plays, on the other hand, have increased, but Martenson concludes that, because they are more expensive than oil finds of the past and the best plays have already been drilled, and because the U.S. still imports a third of its daily petroleum needs, making it just as dependent as ever on the global oil situation, that Peak Cheap Oil has been reached and that we should be treating what remains as "rare, limited and exceptionally valuable."[59]

But is that possible? Paradoxically, fuel-saving technology, such as hybrid and lighter body cars, has enabled drivers to travel farther and faster with the same amount of fuel, leading to increases, not reductions, in consumption.[60] The same thing is happening in our homes vis-à-vis better insulation, windows, and weatherproofing, which have encouraged even more use of our air conditioners, lighting, heating, and electronics.

Even so, massive moves into all manner of gas plays continue, which then compete with both oil and coal production. In June 2012, Royal Dutch Shell announced it will supply liquefied natural gas to heavy-duty trucks through American and Canadian gas station operators by 2013, while three coal-generated power plants have announced they will close and switch to natural gas. Even U.S. President Barack Obama is in on the act, announcing that "we, it turns out, are the Saudi Arabia of natural gas," while prominent Canadian commentators like the *Financial Post*'s Diane Francis, heralding the Shell announcement as a bet natural gas will be the number-one transportation fuel, are calling this development a "game-changer."[61]

Despite such breakthroughs, it is difficult not to conclude that the worn-out production factor of our time may well be fossil fuels and the manner in which they are used, such as the internal combustion engine and electrical power generation. Indeed the little discussed factor in the 2015 rock bottom oil price was how copper, too, and iron ore, indeed most commodities were bottoming – commodities that would normally enjoy healthy prices in healthy economies. But in 2015, even China's economy was slowing as its smog-enveloped cities undoubtedly gave pause about the continued use of fossil fuels.

But in the absence of cheaper, cleaner alternatives, making the most of fossil fuels was necessary and if the shale gale was poised to take on the oil trade, technologies like carbon-capture storage and coal gasification could yet redeem the use of coal, which, with global demand being driven by the Asian economies, the International Energy Agency predicts will approach oil as the top energy source by 2017.[62] The Swan Hills Synfuels development, another Alberta innovation that could be the world leader in clean coal technology, boasts North America's largest coal gasification project and is due to start delivering synthetic gas in 2015.[63] Certainly, new fossil-fuel technologies will help buy a lot of time as peak oil and failing infrastructure, evident in accidents like those involving the Exxon Valdez and British Petroleum's Deepwater Horizon in the Gulf of Mexico, the Lac-Megantic derailment of oil tanks and spillage of diluted bitumen from aging pipelines at Marshall Lake in Michigan, do more

than suggest the end of the oil era is at hand – they present global economies with challenges that will take effect across a number of sectors, of which transportation is merely the beginning. In the last twenty-five years, for instance, control of the world's oil reserves has shifted from 75 percent controlled by international oil companies such as Exxon, Shell, and British Petroleum to 90 percent owned by national and regional oil companies such as Saudi Aramco, Pemex, and Iraq's North and South Companies,[64] not to mention Rosneft, the state-owned Russian company whose acquisition of TNK-BP will make it the largest publicly traded oil company by output in the world.[65] And if analysts like Jeff Rubin see a tectonic economic shift as the world "deglobalizes," gets a whole lot smaller, and jobs, previously outsourced to Third World countries, return to Western economies, including to North America's rust belt, others see the potential for even greater but far less benign upheavals.

They say nothing less than civilizational collapse is possible should the oil era end without adequate preparation for an alternative energy future. From the decline of the Roman Empire to Easter Island (where inhabitants used up the forests),[66] resource depletion has always been a factor in crises where the essential currency is energy – whether food, labour, or fuel. And unlike a financial crisis that can be addressed with cash, even newly printed cash, a resource crisis is permanent,[67] laying the groundwork, if not for outright collapse, then for de facto or outright war over what resources remain. Not surprisingly, then, the race to ensure some kind of a secure energy future, even the continuance of the fossil fuel era, is well and truly engaged and, to some extent, being won. Indeed, the very man who coined the phrase "resource wars" would be the first to declare not the end of the Oil Era but, instead, the beginning of the third great carbon era, the Age of Unconventional Oil and Gas. In addition to continued use of heavy oil (and coal) from Canada, Venezuela, and elsewhere, wrote Michael Klare in August 2013, "Investment in unconventional fossil-fuel extraction and distribution is now expected to outpace spending on renewables by a ratio of at least three-to-one in the decades ahead."[68] According to the International Energy Agency, some $23 trillion will be invested worldwide in new fossil-fuel extraction between 2012 and 2035, while only about $7 trillion will go into renewables, hydropower, and nuclear energy.

That energy should be regarded as the essential currency of the economy is a theme taken up by British economist Dr. Tim Morgan, who, like Jeff Rubin, sees an end to growth but then ratchets up the arguments by more than a few notches. The economy, he writes, is a process of energy inputs and

outputs that money and (he might indulge me for suggesting) even innovation merely tokenize. This has been true since prehistoric times, he writes, when the amount of energy (calories) expended in order to hunt for food roughly equaled the energy (calories) consumed. Life in this context was all about hunting and gathering. During the agricultural age, that equation shifted as fewer people and hence energy inputs were required to grow food, thereby releasing others to create capital goods in the form of implements and infrastructure upon which even more energy could be leveraged – and eventually, to engage in trade. But throughout history, the equation and the critical issue about the economy has remained the same. It isn't the amount of energy available, it is how much energy is used in the process of extracting energy. In fact, the fact that the Western world has benefited from cheap energy supplied by fossil fuels is the biggest factor behind its phenomenal growth, including population growth, over the last two hundred and fifty years. There's even a formula called Energy Return on Energy Invested (EROEI) for calculating this cost, which is, according to Morgan, the killer equation where the viability of the economy is concerned.[69]

Today, you might get 100 units of energy output for 1 unit of energy input from hydro power, but where oil sands and shale plays are concerned, the output is more like 10 units of energy for one unit of extraction costs. And while most of us are prepared for energy scarcity and higher prices (here comes the "killer" part), few of us are prepared for the real implications of a low EROEI economy in which costs in terms of GDP become overwhelming. Profit margins at this level fall off the cliff and so does the economy that depends on such sources. We are, he warns, now very near the edge of that cliff.

In other words, while shale oil, gas, and oil sands plays may bestow energy independence and heal sickly current account balances on countries so endowed, the price they will pay will be low to no growth. Given that innovation and technology piggybacks on and depends on particular energy sources, the implications are vast. Without them, the long wave cannot surge.

Is the end of the auto era in our future as well? This may not be as far-fetched an idea as it appears. In the early decades of the twenty-first century, languishing in the trough of the Kondratieff Winter of the fourth long wave, Apple and Microsoft are capitalized at about $632.56 billion U.S. and $256.78 billion U.S. respectively while, tellingly, General Electric is capitalized at $219.73 billion U.S., and GM at a mere $32.79 billion U.S. By the summer of 2012, even as the auto industry was rebounding with the U.S. government as its largest shareholder, GM's share price was floundering amid speculation

it was again headed for bankruptcy. As Forbes contributor Louis Woodhill wrote:

> In the 1960s, GM averaged a 48.3% share of the U.S. car and truck market. For the first seven months of 2012, their market share was 18.0%, down from 20.0% for the same period in 2011. With a loss of market share comes a loss of relative cost-competitiveness. There is only so much market share that GM can lose before it would no longer have the resources to attempt to recover.[70]

Why might this happen?

GM's flagship, Chevy Malibu, writes Woodhill, meant to compete in the huge "D-Segment" family sedan market against, among others, the Toyota Camry and the Honda Accord, looks to be a crushing failure in 2013 by both design and performance metrics.

> Automobile technology is progressing so fast that the best vehicle in a given segment is usually just the newest design in that segment. Accordingly, if a car company comes out with a new, completely redesigned vehicle, it had better be superior to the older models being offered by its competitors. If it is not, the company will spend the next five years (the usual time between major redesigns in this segment) losing market share and/or offering costly "incentives" to "move the metal."
>
> Uh-oh. At this point, it appears that the 2013 Malibu is not only inferior to the 2012 Volkswagen Passat, it's not even as good as the car it replaces, the 2012 Chevy Malibu.[71]

And that was before GM faced class action lawsuits in 2014 over faulty ignition systems and steering defects.

Whither, then, GM? As it happens, the Big Three automakers, with GM leading the pack, reported strong sales[72] in October 2013, some, the best results since 2007 or earlier. Yet there's no question the costs are huge. Doubling production at GM's Russian plant in St. Petersburg, for instance, will require a billion-dollar investment. Indeed, even Toyota is widely believed to be under attack as the "new" Toyota – Korea's Hyundai – makes price, design, and performance inroads (though a concerted move by the Japanese government in 2013 to quantitative easing and a reduced value for the yen may stanch any bleeding in its export sector).

Similarly, statistics from Europe in late 2012 revealed Renault sales down by 28 percent and Citroën down 26 percent, compelling the committee of

French Automobile Producers to declare it the worst year for the industry since 1997.[73] Fiat, GM, and Ford weren't faring much better in terms of European sales. Only German automobile sales seemed to be holding their own.[74]

Is decline inevitable? Not if car manufacturers and a billion drivers can help it. Despite Ford's share prices in July 2012, which dipped into 2009 levels, and Chevrolet dropping to its lowest since its initial public offering in November 2010,[75] the major Japanese, European, and American automakers are fighting back with better fuel efficiency and better financing deals. All are aggressively pursuing the electric car market. Chevrolet's Volt, despite a suspension of production in mid 2012, has been well received. Even Warren Buffett invested in a Chinese electric car-producing company, BYD. All are seeing the writing on the wall where the depletion of conventional oil supplies are concerned and, much in the way Henry Ford's Model T relieved manure-congested urban streets of horse and buggy transportation, electric cars are clearly one answer to the exhaust-induced smog that plagues the world's biggest cities. But electric cars are expensive, kinks must be unraveled, and tomorrow's sources of electric power generation are as much in question as continuing supplies of economically viable oil. More telling, perhaps, among those companies producing road-worthy production models, namely Nissan, Chevrolet, and, more recently, Ford, it is an outside electric vehicle manufacturer that is having the most impact. The California-based Tesla Motors was incorporated in 2003 and named after Nicola Tesla, the Serbian-American physicist and electrical engineering giant who studied under Edison. Its two key products – the world's first fully electric sports car, the Tesla Roadster, and the fully electric sedan, the Model S – were conceived as high-performance vehicles that happen to be electric (and therefore even more expensive than other electric or hybrid vehicles). Tesla Motors nonetheless achieved both profitability and soaring stock market prices in 2013. With ambitious plans to create an infrastructure of fast-charging stations in America and Europe, questions about Tesla's continued success are compounded by the emergence in the field of a new electric car, the i3, by the highly regarded German company BMW. Even so, having two high-performing competitors in the field can't hurt countries like Germany, which is aiming to have a million electric vehicles on the road by 2020 as well as 35 percent of its energy derived from renewable sources (and 100 percent by 2050). This suggests the electric car is on its way to viability and, eventually, affordability.

In the meantime, no major independent car manufacturer has emerged

in the U.S. since American Motors was purchased by Chrysler in 1987,[76] 53 percent of which is now owned by Fiat – the real sign of the times. In the U.K., Germany's BMW, which produces the Mini, and India's Tata, which produces Land Rover and Jaguar, are leading a renaissance in automobile manufacturing.[77]

Despite the emergence of pent-up demand in Western economies and surging demand in developing economies, other less encouraging trends for the automobile are making themselves apparent. Though, at the end of 2011, auto sales were up, miles driven were down – nearly 1 percent on a year-over-year basis. Moreover, writes David Rosenberg, "One wild card is gasoline prices … Four bucks … alone would siphon around $70 billion from consumer pocketbooks right into the gas tanks."[78] Four bucks and more is an outcome that is all but assured given the high costs of refining, producing unconventional oil, and importing conventional oil, though in 2015, a reprieve from high gas prices was assured when an all-out price war was launched by the Saudis, one from which consumers were clear beneficiaries but also one from which producers were losers as they laid off workers and reduced capital expenditures.

To be sure, global car sales and, particularly, truck sales were hitting a record in 2013, but the era of "peak car" was nonetheless staring us in the face as similar data emerging from Europe, Australia, and Japan demonstrate that drivers everywhere are rebelling against impossible commute times.[79] In K-wave terms, the auto era is in its global diffusion, thanks to Asian demand, but the game is probably waning in Western countries.

More evidence? As boomers move into retirement, their car purchases will, at a minimum, stabilize to become utilities that are the destiny of all K-wave innovations, but, so far, their children, the so-called millennial generation, are failing to take up the slack, preferring instead to use public transport or app-accessed taxis like Uber or simply use any of the many car-sharing operations proliferating in major cities everywhere, allowing them to tweet, text, and phone without the distraction of having to drive. Not for them the call of the open road. Some, apparently, will simply wait to buy a car until they need one to drive to the cottage or to chauffeur their own children around.[80] When peak oil meets peak car, a downward trend would appear to be the logical result, suggesting that the oil and auto era, like the wind and sail era of earlier long waves, could eventually be remembered in recreational pastimes only.

How and when will that day arrive? According to K-wave scholarship, this will happen only when new innovations in transportation and energy emerge, one of which will attract the profitable private investment Kondratieff cautions

is necessary to spur the kind of upswing in the economy that "races ahead and restructures the economy and society."[81]

The one clear picture that does emerge from the conflicting analyses and projections is that the energy industry is in a time of profound flux. In the short term, a recalibrated fossil-fuel industry will take place. It will feature adaptive transportation and electrical generation models, probably using the least expensive fuel for its region. These are important "technics" that will take the oil and auto era into its next diffusion. But, by themselves, these are not major innovations (hydraulic fracturing was an innovation born in the trough of the third K-wave), and we cannot rely on this model lasting past 2050. By that time, the global economy will need a plentiful supply of an environmentally acceptable and inexpensive source of energy upon which the logical innovations in transportation will be built – but their discovery and development periods must get under way now if they are to succeed. If these don't emerge, then transportation itself will become the issue, and the world will, indeed, become the much smaller place that Jeff Rubin anticipates or, worse, the no-growth picture described by Tim Morgan.

A Third Depression?

We are now, I fear, in the early stages of a third depression. It will probably look more like the Long Depression (that followed the Panic of 1873) than the much more severe Great Depression (that followed the financial crisis of 1929–31). But the cost – to the world economy and, above all, to the millions of lives blighted by the absence of jobs – will nonetheless be immense.

–PAUL KRUGMAN[82]

In 2013, a thin veneer of shale-gale boosterism barely contained the uncertainty surrounding the outcome of the global transition into new energy modalities. The West's wealth-producing jobs in manufacturing and computer software were being replaced by lower-paying wealth-consuming jobs in the service sector – that is, in retail ("Walmartization") and, most particularly, in government where unfunded liabilities around pension and health-care plans are escalating. Though consumers in Western economies have access to cheaper goods, they also have much less money with which to buy them and, what money they have, as we will learn in the chapter on the monetary crisis, has much less purchasing power. As Greece and other nations facing sovereign debt crises demonstrate, a service sector economy is not a wealth-producing

economy. Though necessary to facilitate productive enterprise, services must be proportional, unlike in Greece where, in the last ten years alone, public sector wages have doubled, the public school system employs four times as many teachers per pupil as Europe's highest-ranking system in Finland, and the national debt, including some $800 billion owing in pensions, stands at $1.2 trillion – or roughly a quarter of a million dollars for every adult Greek.[83]

With an auto industry unlikely to regain its 1970s prime in production, outsourced manufacturing, expensive energy, and a burgeoning services sector, it is hardly surprising that the productive capacity of the U.S. and the West has generally floundered. Resource-based countries such as Canada, Australia, and some African nations, as well as those with financial houses in good order (for example, Norway and Sweden), might hope to avoid this or to have at least some respite from the worst effects of the global downturn. As for the rest, so long as they refuse the disciplines and innovations necessary, there is little alternative to credit card debt and endless bond issues with which to feed their insatiable appetite for consumer goods and social programs with all the risks that attend such financing.

Deindustrializing the Developed World

…the material basis of the long cycles is the wear and tear, the replacement and increase of the fund of basic capital goods, the production of which requires tremendous investment and its long process.

–NIKOLAI KONDRATIEFF[84]

Will the measures needed to replace, reinvent, and upgrade our oil, electricity grids, pipelines, production relations, and the host of other worn-out production factors in need of repair arrive in sufficient time to prevent yet more crises? In Canada alone, one study estimates, a $15-billion annual investment over a period of twenty years for a total investment of $293.8 billion is needed to repair old electrical infrastructure and to increase power generation from renewable sources like wind, solar, and biomass energy.[85] Floods in Calgary, Toronto, and Montreal in 2013 were a reminder of the poor state of Canada's core utility infrastructure like sewers and water pipes while workers in Ontario's auto sector, North America's largest,[86] have been described as "the most expensive in the world."[87] High productivity levels such as those enjoyed by Japan or Germany might justify high labour costs, but Canada's productivity levels languish near the bottom of OECD ratings. The railway era, despite crashes and crises born of speculative greed and graft, laid the foundation for

building towns and transporting goods and people and so fuelled prosperity. The Hoover Dam, a massive undertaking involving thousands of workers, was built between 1931 and 1936. Where in the West are projects like these being undertaken today? Adding insult to injury, in 2011, Americans were on their way to importing their infrastructure from the Chinese. In June 2011, the *New York Times* reported the arrival of a made-in-China San Francisco–Oakland Bay Bridge.[88] The same weekend, Chinese Premier Wen Jiabao signed contracts in Europe and the U.K. for similar deals.

We are witnessing the deindustrialization of the developed world, Martin Wolf, *Financial Times* chief economics commentator, told a large gathering in Ottawa in September 2011. "Industry is the new agriculture … there is nothing we can do to reverse the decline … increased productivity is the basis of our long term standard of living."[89]

Indeed. If the Great Depression presented the global economy with its (then) biggest paradigm shift as agriculture gave way to industrialization, today's paradigm shift could be even greater as industrialization gives way to …? Well, no one seemed to know the answer to this question, which perhaps explained why the global economy refused to budge from its trough of the first Kondratieff Winter of the twenty-first century. . .

That people in Western economies had no jobs, poorly paying jobs or, conversely, high-paying jobs in the non-wealth-producing public sector while factors of production were wearing out, running out, or rusting out, at least explained why so much personal debt and, in turn, government debt became habitual. As one K-wave scholar concludes, "Clearly the U.S. (and world economies) have suffered the structural change, characterized by overexpansion, saturation, technological obsolescence, and poverty of new ideas, that defines the stage of depression of the (Kondratiev Cycle/Structure). Of course, this structural change cannot be reversed by the simple linear policies of mainstream economists."[90]

But that did not stop them from trying.

Economies abhor vacuums created by loss of productive capacity. Yet one sector in Western economies not only would attempt to fill the vacuum but also would survive the economic "downturn" that commenced in the late '70s, and thrive, at least for a while. Production of consumer goods, electronics, and even computers themselves may have been outsourced to Asian countries, but superior technological know-how gave the West a "comparative advantage" in the area of structured financial "products." The financialization of Western economies, mostly in the finance, insurance, and real estate sectors (hence the

acronym "FIRE," as in the FIRE economy), put untold wealth in the pockets of Wall Street, Bay Street, and City operators. Commencing in the 1980s, it and its most conspicuous symptom, the subprime mortgage, would, by 2008, become the straw that broke the back of whatever was left of the real, productive, economy.

Including the murky world of derivatives exposure, worth, by some estimates, a quadrillion dollars, what a straw it was! With trepidation, I braced myself for the monumental task of sorting through monetary policy and financial regulation. Was I ready for my descent into the rabbit hole?

No, I was not.

PART 2

Entering the Trough of the Kondratieff Winter

FOUR

Overconsumption Meets Underproduction: The Monetary Crisis

Governments should never forget that production always takes priority over finance. As Adam Smith and Karl Marx both recognized, finance supports wealth creation, but in itself creates no value.

–HERNANDO DE SOTO, 2009[1]

John Budden likes to tell the story of how Ludwig von Mises stopped hyperinflation in post–World War I Austria.

Mises, along with Friedrich von Hayek, was a leading light in Carl Menger's Austrian School of Economics, which believed that human behaviour rendered statistical and mathematical modelling of the economy impossible and that any attempt by a government to control it would therefore cause more problems than it solved. So when the Austrian government asked for his advice on how to quell the hyperinflation of 1922, Mises asked the bureaucrats to meet him at midnight at a designated location in Vienna. They arrived at the specified hour and location and anxiously inquired, "Professor Mises, how can we stop this inflation?" Mises pointed to a building nearby and said: "Hear that noise? Turn it off!" The noisy machinery was stopped, and the problem was solved. The building was the government printing office in charge of producing new banknotes around the clock. Turning off the noise ended the inflation.[2]

The Lesson of Austria

The chickens of deficit financing … had swarmed in to roost.

–LORD D'ABERNON[3]

In the aftermath of World War I, the former central powers, Austria, Hungary, and Germany, resorted to inflation, ostensibly to overcome debt made

intolerable by punitive damages imposed by the Peace Accords. In reality, a great deal of that debt had been incurred before and during the war.

Rather than raise taxes, Germany had been financing the needs of government and business demands for credit by borrowing and by printing money. The gestational period for its hyperinflation, before the mark blew up in 1923, was, in fact, a full nine years. Like other World War I combatants, Germany had abandoned the gold standard – a mechanism that kept government debt in check – during the summer of 1914. But unlike other combatants whose money supply doubled or tripled, the German supply quadrupled. Germany's victories and superior industrial growth under Otto von Bismarck, the statesman who prevailed over European affairs as Minister President and first Chancellor of a united Germany, made it so confident of winning and being able to pass its costs onto the vanquished that it raised only 10 percent of the war's $47 billion costs from taxation.[4] To be sure, the cost of war reparations, when they arrived, was a formidable and additional millstone for the German economy, but Germany was heavily indebted well before these were imposed.

The situation in Austria was no better and, for our times, is particularly instructive. By August 1922, the Austrian state, thoroughly in the grips of hyperinflation, was unable to meet its liabilities to its employees. Official salaries and wages, both of whose numbers had greatly increased during the war years, weren't helped by a cost of living index that was up by 124 percent. Starving mobs threatened the imminent collapse of government authority. That same month, with the krone valued at 35,000 to the pound, the Austrian chancellor, cap in hand, accepted terms from the League of Nations obliging his country to get its financial house in order.

As Adam Fergusson notes in *When Money Dies*, the "priority was to set in reverse a system which, based on a mixture of political expedience and Socialist benevolence, was the negation of economics."[5] He then describes a situation that could apply to Greece in 2010.[6] Viennese state employees, in the Austrian republic of 6.5 million persons, outnumbered state employees in the capitals of much more highly populated countries. Tax collection was impossible, and all state enterprises were losing money. The railways were overstaffed and undercharging. Three railway men in Austria did work that required only two men in Switzerland, while fewer than half the passengers paid full fare.

Corroded by a culture of entitlement and inflation from within, and crushed by defeat in war from without, all that remained to drive the final nail into the coffin of the Austro-Hungarian Empire was the collapse of the

Eastern and Central Europe's largest bank, the Viennese Credit-Anstalt, in 1931. Following the stock market crash of October 1929, the collapse of Credit-Anstalt, which owed money to British banks, which in turn owed money to U.S. banks, set off a domino effect, thus triggering the second leg of the financial crisis that plunged the global economy into the Great Depression of the 1930s.

The inability of the former central powers to finance their debts and deficits by taxation or borrowing is often blamed on the vicious cycle triggered by wage and price increases. But, as Mises surmised and Jens O. Parsson in *Dying of Money* elaborates in great detail, the chief villain was the printing press itself. As ever more banknotes were printed to meet ever-increasing liabilities, the value of every note was diminished. People needed an increasing amount of money just to meet basic survival needs. Between May 1921 and May 1922, the Austrian krone dropped from a value of 2,000 to the pound to 35,000 to the pound. In Germany, "wheelbarrow" inflation was under way. Dr. Hjalmar Schacht, Germany's National Currency Commissioner under the Weimar republic, noted that the amount of money needed in 1923 to buy a single egg would have purchased five hundred million eggs in 1919, at the end of World War I.[7]

Losers and Winners

The effects of inflation upon share prices generally caused immense shifts in the distribution of wealth among a now large share-holding community, and contributed to the rancour and demoralization of the nation at large.

–ADAM FERGUSSON[8]

The human toll exacted by the Great Depression is well documented. As the name suggests, this period was characterized by massively depressed or deflated prices leaving anyone with a job, investments, or household or business debt extremely vulnerable. Less well documented is the human toll exacted by hyperinflation, a period when prices go hyperbolic.

We all have a mental picture of "wheelbarrow" inflation – when workers piled millions of paper marks, often only a day's wage, into wheelbarrows and trundled to the bake shop or butcher where prices were increasing by the hour. This climax of Germany's hyperinflationary period in 1923 has a tragicomic familiarity to it.

Fergusson refers to the melodramatic but poignant silent movie *The Joyless Streets*, saying it captures the mood and the times of hyperinflationary Vienna.

Made in 1925, it features a young Greta Garbo playing a character forced to consider prostitution in order to support a family whose life savings, pension, and insurance policies were now worthless. Saved by an American Red Cross worker, she is more fortunate than the many women who were reduced to prostituting themselves, often to high-flying industrialists made rich by speculating on the currency exchange markets, or simply to the local butcher to acquire scarce meat. Still others would find themselves bartering away their worldly goods – furniture, the family silver, a grand piano – for the sake of some basic necessity. Starvation, bribery, and graft became commonplace; even crops were pillaged from the fields in which they grew.

The clear winners in this situation were debtors, because they did not owe anything after the inflation. The highly indebted German government benefited most. Farmers did particularly well: their mortgages were forgiven outright, and the value of their produce skyrocketed. The losers were endowments, which were wiped out, and fixed income derived from bonds, savings, pensions, and insurance policies – in other words, the holdings of the middle classes. And while stocks soared – German shares rose from £89 million in 1922 to £271 million in 1923 – those of "inflation-born" businesses ended up as worthless as bonds.[9] In addition, Fergusson wrote, "inflation reduced the gold value of dividends in contrast to the illusion of prosperity high paper dividends caused."[10] Not until the German reichsmark was retired and a new currency installed did German hyperinflation – in which the "final convulsion"[11] of price rises of tenfold in four months, two hundredfold in eleven months and, by 1923, quadrupling each week – come to heel. Anyone who held the reichsmark lost everything.

Fergusson's *When Money Dies*, published in 1975, and Parsson's *Dying of Money*, published in 1974, became cult books during the summer of 2010 after *The Telegraph*'s international business editor Ambrose Evans-Pritchard noted their relevance to today's economic climate. Why were these analysts, writing in the 1970s, so concerned about a period in history with tragic monetary excesses? And why were these being resurrected in 2010 when everyone seemed more concerned about a deflationary depression similar to the one experienced in the 1930s? William Rees-Mogg, in what is arguably the finest work on the subject, *The Reigning Error*, was also, in the 1970s, writing about periods in history that experienced high inflation. What was the connection? Were these and other events like the 2008 meltdown part of the Kondratieff cycle?

Understanding Money

Throughout virtually all of human history, up until 1971, money was some form of valuable and durable commodity or a claim on such a commodity.

–BENN STEIL AND MANUEL HINDS[12]

These questions became particularly problematic for me. Understanding the debt crisis and the crisis of worn-out factors of production was challenging enough. But trying to understand monetary policy – policies about money! – and the role it played in the 2008 meltdown would be the biggest task I faced while working on this book. From the bank run on Northern Rock to the collapse of Lehman Brothers, the mysteries of the global banking system appeared unfathomable. Even John Budden had to stand aside as I agonized over the meaning of terms such as "fractional reserve banking," "bond spreads," and other concepts that were totally alien to me.

Yet, as economic historian Niall Ferguson admonishes in *The Ascent of Money*, "the rewards for 'getting it' have never been so immense. And the penalties for financial ignorance have never been so stiff."[13] The words leapt off the page, and I knew I had no choice.

Naïve but determined, I slipped down the rabbit hole of monetary history.

In the beginning, money did not exist.[14] Hunter-gatherer societies relied mostly on barter, while more primitive societies simply raided and helped themselves to whatever they needed with no need of money or other tokens of exchange.[15] The Inca Empire was an exception. Using a system that made labour the unit of exchange, it survived until the sixteenth century when the conquistador Francisco Pizzaro established Spanish rule in Peru and plundered its ceremonial gold.

Gold bars were used as money as early as 4000 BC by the Egyptians, though it was not until 600 BC that coins emerged in the ancient Mediterranean area of Mesopotamia. The Chinese developed a bronze coin in 221 BC and were using something resembling a promissory note as early as 118 BC, though their (and the world's) first full-fledged banknote wouldn't appear until the seventh century. By Roman times, bronze and silver and gold were being used in the West for coinage, and by the time of the Crusades, such metals were in sufficiently short supply that wars to convert gold-bearing heathens to Christianity were undertaken.[16] Indeed, the world might have been a safer place if everyone had simply followed the example of ancient Mesopotamia's clay tokens, which, like today's banknotes, were a recorded promise to pay the

bearer a certain quantity of a certain commodity – usually barley or wool, but sometimes a precious metal.

In order to be a medium of exchange (better than bartering), a unit of account (how many units at what value), and a store of value (maintaining value over time and distance), money had to be "available, affordable, durable, fungible, portable, and reliable."[17] For these reasons, gold, silver, and bronze became the ideal raw materials for monetary purposes though, as history would repeatedly demonstrate, money is little more than the collective belief it is worth what the issuer says it is worth. (This is why we are able to go our ATM and, without ever physically seeing or touching a coin or a note, rely on the fact that a viable transaction has taken place.)

Events that challenge our belief about the unit of exchange ultimately affect the viability of currencies. If too much money is printed, its value may be diluted, requiring more and more money to purchase what a small sum would have purchased previously. In ancient times, even gold and silver coins could thus be "debased" simply by diluting the precious metals with a base metal.

While gold would retain a mystique dating back to ancient times and even acquire institutional relevance through the creation of a gold standard in the seventeenth,[18] eighteenth, nineteenth, and twentieth centuries, more important than the medium of exchange (i.e., gold, clay tablets, paper, or clam shells) would be the institutions and instruments accommodating its use. Buying and selling using an agreed medium of exchange was, therefore, only part of the picture that fuelled the rise of Western economies. These would not have been possible without institutions that facilitated borrowing and lending as well. And while money lending had always been a particularly risky business, from the time the Medicis made it respectable in Renaissance Italy, no financial institution would be more important than the banking system whose seventeenth-century success stories included the creation of the Dutch East India Company and settlements in Canada and America.

The Netherlands (Holland) and England, in turn, developed the checking facilities we take for granted today, while profiting from a system in which only a *fraction* of depositors' money was kept in reserve. Then, as now, the theory behind this system was that, since depositors were unlikely to withdraw all their money all at once, the remaining deposits could be lent to borrowers, whatever risk that might entail.[19] Finally, the creation of the Bank of England in 1694 – a precursor of today's central banks – assisted the government with war finance and eventually issued banknotes.

In addition to fuelling commercial success, these innovations laid the groundwork for key elements of today's banking system: cashless interbank and intra-bank transactions; fractional reserve banking; and central bank monopolies on note issue. Profound changes in the very nature of money were under way. As Ferguson explains:

> No longer was money to be understood as the Spaniards had understood it in the sixteenth century, as precious metal that had been dug up, melted down and minted into coins. Now money represented the sum total of specific liabilities (deposits and reserves) incurred by banks. Credit was, quite simply, the total of banks' assets (loans). Some … might … consist of precious metal … But most of it would be made up of those banknotes and token coins recognized as legal tender along with invisible money that existed only in deposit account statements. [This was] the basis of the modern monetary system, with relationships between debtors and creditors brokered or 'intermediated' by increasingly numerous institutions called banks.[20]

The financial and industrial revolutions reinforced each other and so gave each a velocity neither would have achieved by itself. Spreading beyond late eighteenth-century Britain to Western Europe and settlements in North America and Australia, they also evolved as technical innovation, the creation of new kinds of firms, and various crises determined which would survive and which would die out.[21]

Central Banks and Kondratieff

To understand money, one absolutely must understand what a central bank is all about.

–RON PAUL[22]

The Bank of England was established in 1694. In 1717, Sir Isaac Newton, then Master of the Royal Mint, determined a valuation for gold. For the first time, a commodity that had been in use as money over thousands of years now had a formalized relationship with a national currency. A pound sterling, itself a denomination of 16 ounces of sterling silver, would be convertible into a fixed quantity of gold at the rate of £3 17s 10½ d per ounce, Sir Isaac decreed.[23] Of course, this meant the banks that issued the currency, in this case the pound sterling, would have to have the gold on hand for conversion purposes, if necessary.

Other countries also created central banks, including, in 1800 and 1875 respectively, France's Banque de France and Germany's Reichsbank, but it was England, now with a monopolistic central bank operating on the gold standard that, again in 1818, provided a key innovation. After several crises in which bank reserves (that "fraction" of deposits held in notes and bullion and now also called "capital requirements") failed to meet the demands for withdrawals, the editor of *The Economist*, Walter Bagehot, opined that the Bank of England's proper role in a "liquidity" crisis was to be the "lender of last resort."

In the colonies, having a lender of last resort also appeared to be a good idea. As bank runs took their toll on personal savings and banking institutions, their system of privately owned banks with low capital requirements was resulting in serial crises. Following the hyperinflationary American War of Independence that installed George Washington as the first president of the United States of America in 1789, the creation of the First Bank of the United States was high on the agenda.

It was also the beginning of Kondratieff's first long wave and the beginning of the industrial revolution.[24] As Berry puts it:

> I conclude that, within the inherently high noise levels of history, prices and economic growth move in synchronized rhythms in which alternating stagflation crises and deflationary depressions separate cycles of deflationary and inflationary growth … Bandwagon effects produce overshoot and collapse: overinvestment in new technologies, overfunding of industries, and unsustainable levels of valuation in property and stock markets at one extreme; excessive pruning and panic sales at the other.[25]

The First Wave: 1789–1819–1845 (trough–peak–trough)

Bank-paper must be suppressed, and the circulating medium must be restored to the nation to whom it belongs.

–THOMAS JEFFERSON[27]

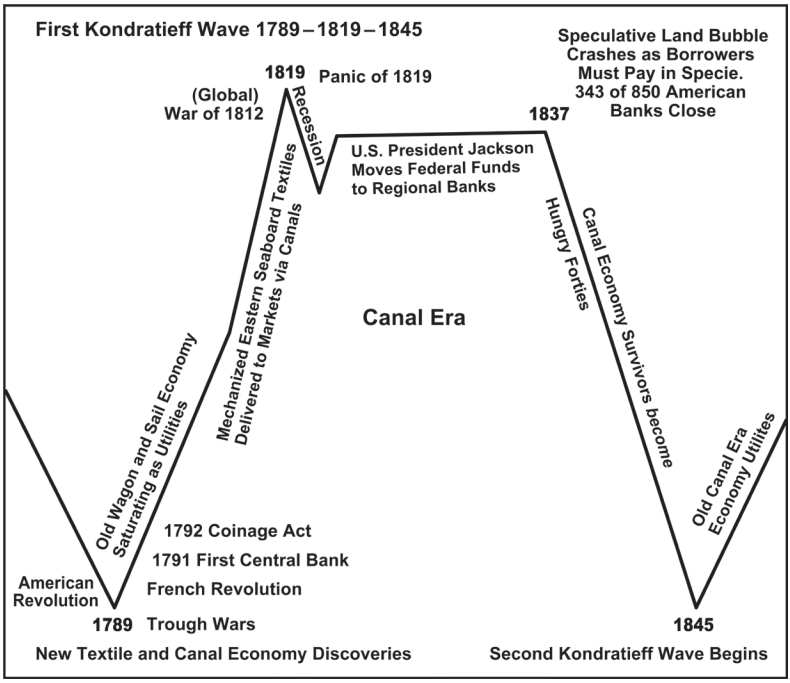

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Chart of First Wave[28]

***Key Innovations**: Coke-smelting, Flying-shuttle, Manchester-Worsley Canal, Spinning Jenny, Steam Engine, Four-course Crop Rotation, Power Loom. **Key Industries**: Iron and Steel, Textiles, Water Transport.*[29]

Typical of wartime measures throughout history, money printing financed the American War of Independence, which took place between 1775 and 1783. Emerging in 1789 from the hyperinflationary depression that followed the war, debate around the powers that a central bank would wield was heated. While proponents like the secretary of the Treasury, Alexander Hamilton, argued for its ability to encourage entrepreneurship through the expansion of credit, opponents like Secretary of State Thomas Jefferson feared its being corrupted by speculation and manipulation. Despite sharing Jefferson's concerns, George

Washington came down on the side of credit expansion and entrepreneurship and reluctantly signed the charter of the First Bank of the United States of America in 1791. Passage of the Coinage Act followed in 1792. It established bimetallism, gold and silver, as the basis of the American monetary system. Though the First Bank of the United States of America lost its charter in 1811, a new monetary system was nonetheless under way.

By 1789, the Industrial Revolution was also under way. Economies based on manual labour and draft-animal labour were becoming economies based on manufacturing. In England, the mechanization of the textile industry and methods of transportation using coal-fuelled steam power and water wheels dramatically increased production capacity and opened a path other nations soon followed.

As in England, the upswing of the Kondratieff Spring in America was coalescing around the key innovations of the era, namely iron rails, the invention of the steamboat, and the building of canals. These were replacing obsolete wagon and sail technologies and opening large areas along the eastern seaboard, reducing transportation costs, and thereby expanding commerce, particularly in textiles whose production was further aided by the development of the cotton gin. By the end of the French Revolution and the War of 1812, cotton was the chief export of the U.S.

Also typical of the long-wave dynamic was how, during the peak of the Kondratieff Summer in 1816, post–War of 1812 euphoria had resulted in speculative excess and then the inevitable slump. Cotton prices continued to be a staple of the U.S. economy, but when the newly created Second Bank of the United States, having expanded the money supply in 1817, suddenly contracted it in 1818 as a result of retiring a $4.5 million debt for the Louisiana Purchase, the price of cotton dropped by 50 percent. The Panic of 1819, America's first major financial crisis, was promptly followed by a two-year recession. By the 1820s, the Kondratieff Autumn of the first wave, another speculative boom was under way. This was the Era of Good Feelings, which featured a rapidly expanding population (ten million in 1821 that expanded to sixteen million by 1837) and a vast investment of $125 million in canal and road building to facilitate its settlement. Railway building commenced, with a promise of expansion even greater than that achieved with canal building, as did payment of the national debt. At the same time, the cotton crop of the southern states increased from 536,450 bales in 1833 to 916,960 bales in 1837.[30]

Trouble was assured, however when, in 1832, President Andrew Jackson refused to renew the charter of the Second Bank of the United States. Its

creation in 1817 had been a response to inflation following the War of 1812 and difficulties the U.S. faced financing its military operations. With branches across the country, it housed federal government funds and acted as a de facto central bank. Now Jackson, a southern "agricultural" Republican suspicious of anything that smacked of elitism, was critical of how it centralized financial powers and favoured northern over southern and western states. In 1833, he removed federal funds from the bank and distributed them among state and local banks.

This large infusion of cash, from the conservative Eastern banks to mostly wildcat Western banks, expanded the basis for lending in an area where, with banks issuing their own notes, land and stock speculation was already well under way. Between 1834 and 1836, the money supply increased from $172 million to $276 million – with a 43 percent increase in 1835 alone and a 25 percent increase in prices. Land and real estate prices rose 30 percent and 150 percent, respectively, in the West and in New York City.[31] Then, in 1836, well aware that extraordinary land values were the result of inflation, Jackson issued his Specie Circular, which required that payments for public lands be made in gold and silver rather than paper money. When banks also insisted on payment in specie, borrowers defaulted, triggering a run on the banks. Three hundred and forty-three banks from a total of eight hundred and fifty nationwide closed, while land sales dropped to 25 percent of the previous year's sales,[32] and foreclosures mounted. According to Charles Hoffmann, author of *The Depression of the Nineties*,

> The panic of 1837 was one of the most disastrous crises this nation has ever experienced. It was the culmination of a long train of events that extended back over a number of years. It marked the close of one epoch in our industrial history, and the beginning of a new era. It engulfed all classes and all phases of our economic life within its toils: and for seven long years the people of this land struggled to free themselves from its oppression.[33]

As the Panic of 1837 sent the first K-wave into its trough, the Hungry Forties and the first Kondratieff Winter of the nineteenth century got under way. So too was a pattern of economic expansion and contraction, reinforced or triggered by the money supply and other monetary mechanisms, that would continue through three more K-waves and into the 2008 meltdown.

The Second Wave 1845–1864–1896 (trough–peak–trough)

The depression between 1873 and 1886 … matched the depression of 1929-1939 … One report notes three million tramps in the 1873-74 winter.

–NATHAN H. MAGER[34]

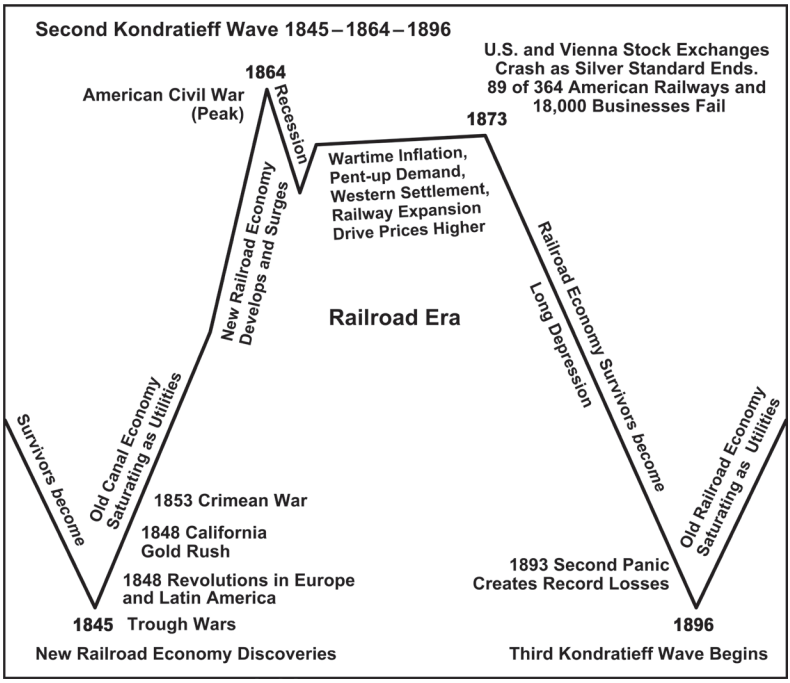

Figure 4 Copyright © 2015 Margret Kopala

Chart of the Second Wave[35]

***Key Innovations**: Steam Ships, Railway Equipment, Steel, Coal and Petroleum Production, Machine Tools, Portland Cement. **Key Industries**: Coal, Transport, Heavy Engineering.*[36]

Canal building continued apace, but now railroad expansion became the next New Economy during the Spring and Summer upswing of the Second Kondratieff Wave. With 3,000 miles of track laid in 1840, increasing to 24,000 miles in 1857, a $9,168,072,000 investment in railroads had been made by 1897.[37] Along the way, huge areas of the American West were opened and with them new settlements and construction. New machinery for textiles and for working metals and wood appeared, as did new processes in manufacturing.

With two million European immigrants arriving between 1850 and 1855 and a large influx of gold from California and Australia stimulating the money supply, inflation escalated as did the values of land, harvests, and money. Between 1850 and 1857, the railroads received twenty-four million acres of federal land grants, half of which were sold, mostly to speculators. By 1855, $800 million was invested in land, most of it on credit, while a key monetary event of the period, the California gold rush of 1848 to 1855, created "easy" money for speculation by Europeans and Americans alike in sugar and cotton, as well as railway stocks. Farmers, particularly, mortgaged themselves heavily in order to buy more land. Whole new industries developed around the production of steel, coal, and petroleum. Politically, the nation was split between an agrarian South and an industrial North divided on issues of states rights and free trade. By 1860, the period immediately preceding the Civil War, the shift from an agricultural to an industrial economy was under way, along with a price inflation of 20 percent per year that continued through the Civil War. With the issuance by the Union government of the fiat (no gold backing) greenback to finance its military operations, inflation rose 300 percent. At the end of the war, prices continued to rise, not because of the money supply, but because of the scarcity of product. As the Civil War ended, the Kondratieff Summer was peaking. As Kondratieff observed:

> First, the high rate of investment "in large and expensive constructions increases the demand for capital" … leading to an increase in interest rates. But the crucial development is the "growth of external military and internal social upheavals" which "increase unproductive consumption (wars) and cause direct disruption to and weaken the rates of accumulation, while on the other hand, they increase the demand for capital … which then becomes more expensive." After a lag, "the earlier rate of investment in capital constructions falls. The activity of economic life is reduced and prices fall."[38]

That "lag" would come to be known as the plateau, or Kondratieff Autumn, phase of the long wave. Prices peaked at the end of the War in 1864–1865. In the plateau period that followed, pent-up demand for goods, the implementation of innovations, a postwar baby boom, settlement of the West, and railway expansion all escalated. The trigger for the Kondratieff Winter downswing, or what would become known as the Long Depression, arrived in 1873. A second repetition of what would become a familiar pattern, it was a monetary event replete with a banking crisis. And this time it was global in scope.

The seeds of this monetary event were planted in the Franco-Prussian War of 1870 to 1871. With more efficient use of the railways and steel-made artillery, Otto von Bismarck won the war and substantial reparations from France in gold. With so much gold, he no longer needed the silver standard (or the silver "thaler," the name given in 1519 to silver coins minted in the Bohemian town of Joachimsthal and the origin of the word "dollar"[39]). The effect of his decision was felt everywhere, most particularly in the U.S. where a great deal of silver was being mined.

By 1873, railroad investment was in bubble territory, involving huge amounts of speculative cash. After agriculture, it was also the nation's biggest employer. Like the German currency, U.S. currency was backed by gold and silver. With the Coinage Act of 1873, the U.S. followed Germany's lead in eliminating the silver standard. Silver prices immediately became depressed and, with them, the supply of money also was depressed. This raised interest rates, a particularly onerous burden for debtors – especially farmers and those involved in the speculative bubble around railway stocks. Rampant fraud in the building of the Union Pacific Railway did not help.

Particularly exposed was Jay Cooke & Company. A large establishment bank, it failed to market a $100 million bond issue that it needed to develop the Northern Pacific Railway. A further failure to close on a $300 million government loan in September 1873 resulted in a declaration of bankruptcy. A chain reaction of bank failures followed that closed the New York stock exchange for ten days. In the "shakeout" mode characteristic of bubbles in the Autumn of the K-wave, 89 of 364 railways went bankrupt. By 1875, eighteen thousand businesses had failed and, by 1876, unemployment had reached 14 percent. In Europe, where £200 million in war reparations from France had fuelled a similar expansion in Germany and Central Europe, the depression was triggered by a collapse of the Vienna Stock Exchange in May 1873, a few months before the Jay Cooke catastrophe in the U.S.[40]

Though technically the American Long Depression ended in 1879, an extended period of instability commenced in which growth took place but prices declined. Production in iron doubled, steel production increased twentyfold, and railways boomed. The price of cotton declined 50 percent between 1872 and 1877, and in 1894 the price of grain dropped to a third of its value in 1872. In Kondratieff long-wave terms, it is global prices that matter and these, after the Panic of 1873, did not trough until 1896.

The Third Wave 1896–1919–1949 (trough–peak–trough)

Neither the Long Depression of the 19th century nor the Great Depression of the 20th was an era of nonstop decline – on the contrary, both included periods when the economy grew. But these episodes of improvement were never enough to undo the damage from the initial slump, and were followed by relapses.

–PAUL KRUGMAN[41]

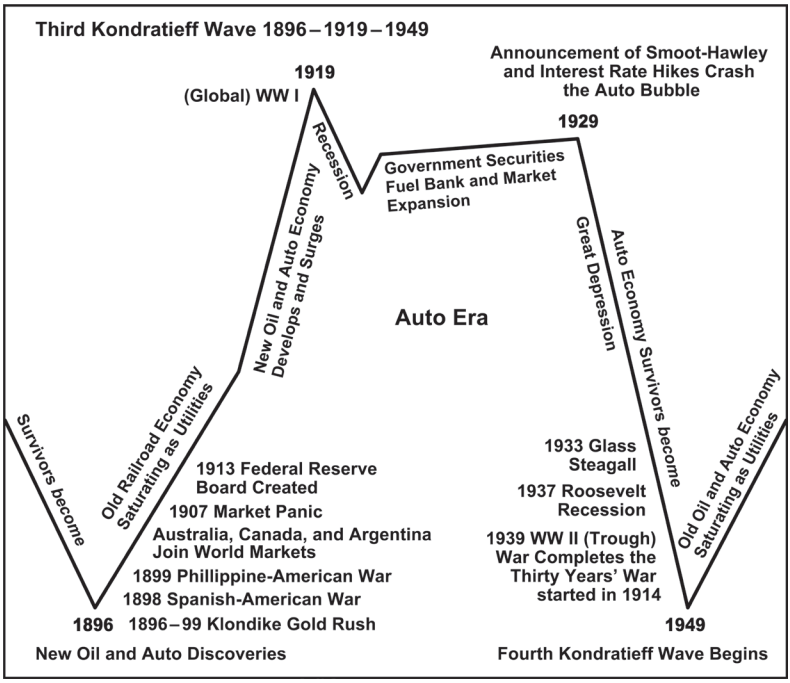

Chart of the Third Wave[42]

***Key Innovations/Discoveries**: Electricity, Internal Combustion Engine, Texas Oil Gushers, Heavy Engineering, Heavy Armaments, Steel Ships, Cable and Wire. **Key Industries**: Steel, Auto, Aircraft, Telecommunications, Radio, Aluminum, Consumer Durables, Plastics.*[43]

The Production Crisis chapter demonstrated how, during the Third Wave, America's old railway economy was overtaken by key innovations around the internal combustion engine, oil, electricity, and mass production techniques that in the 1970s diffused and saturated into the Summer of the Fourth Wave. The following section on the Third Wave, therefore, more generally focuses

on the monetary events of the period, the first of which in 1907 can only be described as a belated and overdue response to the panic-stricken bank runs that were a staple of previous eras. Because, despite inflations, depressions, and runs on the banks from the time the American colonies were settled, the whole notion of a central banking system was simply too controversial for it ever to take hold for very long.

Finally, following the climactic crash of 1893 that plunged the Long Depression into its long-wave trough, the Panic of 1907 finished the job. With the New York Stock Exchange having plummeted by 50 percent and a run by depositors on banks under way throughout the nation, only when JP Morgan and other New York bankers, acting as de facto central bankers, provided the necessary liquidity from their own pockets did the panic abate. Congress got the message and, in the following year, created the National Monetary Commission to study the banking system and propose reforms. Yet, in 1910, with little progress having taken place, it was left to a handful of bankers, one senator, and an assistant secretary of the Treasury to secretly meet on an island located off the coast of the U.S. state of Georgia in order to break the log jam. Their actions have been the source of conspiracy theories ever since. The proposal arising from the Jekyll Island sojourn formed the basis of the Federal Reserve Act that, along with newly centralized powers and a national income tax, was signed into law by Woodrow Wilson in 1913. It created twelve regionally based Federal Reserve Banks that would be run and controlled by local bankers, as well as a public agency, The Federal Reserve Board, in an oversight role with a Board of Governors and chair (in 2015, that's Janet Yellen) appointed by the president. Like other central banks, "the Fed" would have a monopoly over the issuance of currency and the ability to regulate the price of credit (i.e., interest rates) and therefore how much money flowed into the system. Today, its primary mandate is to maintain price stability and full employment.

Mostly, however, the Federal Reserve Board would act as a "lender of last resort." Conveniently, its creators would forget Bagehot's two preconditions for making the role of a "lender of last resort" feasible: the provision of collateral from the recipient institution and the application of punitive interest rates to the loan.[44] Instead, they created optimal conditions for the development of what has come to be known as "moral hazard." That is, by providing guarantees that public funds will bail out banks and corporations like the automotive industry every time they get into trouble, governments encourage more risk taking and the confidence that rescues will continue.

Then, in a revolving door pattern that would become all too familiar

between the White House and Wall Street, a JP Morgan employee, Benjamin Strong, who was present at the Jekyll Island meeting, became the first governor of the most powerful of the regional banks, the Federal Reserve Bank of New York. It was October 1914. The Third Wave was rising into its summer peak and, like this point in the two previous K-waves, war loomed. Two months earlier, Germany had declared war on France.

Strong, along with Montagu Norman, head of the Bank of England, Hjalmar Schacht, Germany's Currency Commissioner and President of the Reichsbank, and Emile Moreau, Governor of the Banque de France, would together become the Lords of Finance[45] – as Liaquat Ahamed calls them in his book of the same name. Though Strong would die a year before the 1929 stock market crash, all held office through World War I, the Central Powers' hyperinflation, and the 1920s American stock market excesses. Despite considerable knowledge and expertise, none could contain and, according to Ahamed, may even have helped sow the seeds of the Great Depression – an observation, I would eventually learn, with which prominent economists like Nobellist Fredrick Hayek and British economist Lionel Robbins would agree.

No stranger to the political process, I was nonetheless surprised to learn about the amount of power and influence these Lords of Finance could wield. Like most people today, I came of age with little knowledge of the historic role played by gold in the world's monetary systems where, as anthropologist Jack Weatherford writes: "Gold had done what no conqueror or religion had managed to do: it had brought virtually all people on earth into one social system."[46]

Learning about the relationship of the Lords of Finance to the gold standard would therefore provide a framework for understanding today's monetary climate and some of its possible outcomes, as well as for understanding the behaviour of gold in today's stock markets.

Prior to World War I, fifty-nine countries were on the classical gold standard.[47] Each currency was tied in value to a specific value of gold; the dollar was 1/20 of an ounce of gold. Paper money was obliged to be convertible into gold, and international payments were settled in gold bullion. For this purpose, most of the world's monetary gold, two thirds of it, was stored in the underground vaults of central banks. A productive economy and a trade surplus meant more gold in the nation's central bank, which meant good times and therefore easier credit terms; when there was less, then the country had to tighten its belt. Central banks could print money, but they had to have a prescribed amount of gold bullion to back it up. This formula varied among

countries, but the effect was the same. Tying the amount of the currency to the amount of gold meant governments had to live within their means. They could not print or spend more than their gold holdings allowed. Though booms and busts still took place, currency debasement and inflation were largely contained, at least in peacetime. According to Liaquat Ahamed, "Joining the gold standard became a 'badge of honor,' a signal that each subscribing government had pledged itself to a stable currency and orthodox financial policies."[48]

Proponents of the gold standard argue that the period between 1815 and 1914 in which the classical gold standard prevailed was a "Golden Age."[49] Similarly, others say the period 1870 to 1914 was a time of "Peak Progress." The Second Industrial Revolution – a time when steam and railway technology was giving way to the internal combustion engine, electricity, and radio technologies – was, in Kondratieff long-wave terms, "the high point for technology as an economic driver."[50] Either way, the fact that a relatively stable monetary system should be in effect at the same time major technological innovations are under way is surely no coincidence.

"The best way to destroy the capitalist system is to debauch its currency." So wrote Vladimir Ilyich Lenin.[51] Indeed, on the eve of World War I, combatant governments abandoned the classical gold standard. In order to finance their war efforts, they needed more money, which they simply printed for this purpose. As noted above, each country inflated its money supply by two, three, and, in the case of Germany, even four times. Only the U.S., which entered the war late and which was booming thanks to exports in munitions, food, and trucks to the warring countries, kept its money printing sufficiently low that its redeemability in gold was not affected. More than that, by 1920, Wall Street had subsumed Britain's old job as the centre of global finance. Not only had it funded its war effort through the internal sale of bonds, but it also reversed its position as a pre-war $3-billion-dollar international debtor to a $3-billion-dollar creditor. And despite an anticipated but mild depression, it was sitting on one third of the world's gold supplies.[52]

The other major economies, in addition to catastrophic debt levels, now had to contend with freely fluctuating exchange rates for their currencies. Monetary chaos followed as inflated pounds, francs, marks, and other currencies depreciated in relation to gold and the dollar. As the arch-libertarian American economist Murray Rothbard explains, this in turn led to "competitive devaluations, warring currency blocs, exchange controls, tariffs and quotas, and the breakdown of international trade and investment."[53] Unlike Britain, which raised taxes to meet its debt obligations and suffered the recessionary

consequences, worst affected were the Central Powers – Germany, Austria, and Hungary (though countries like Poland were also affected). Hyperinflation was the inevitable result of high debt levels combined with an ongoing supply of newly printed money.

Excesses in one area of the political economy lead to excesses in other areas. Writing about the consequences of inflation and deflation, Ron Paul and Lewis Lehrman observe how they have led to "revolutions in the world of commercial affairs … Lenin in Russia, Hitler in Germany, and Mao in China … came to power after great inflations."[54]

Efforts to restore monetary order at the Genoa Conference in 1922 failed; instead they rearranged the dominoes. While the U.S. remained on the classical gold standard, Britain – with the help of loans from the Federal Reserve and the House of Morgan of $200 and $100 million respectively – adopted a revised gold standard, the gold exchange standard, in 1925. This allowed it to redeem pounds sterling in gold at its pre-war value as well as in dollars. This presented two problems. The pound sterling, thanks to British debt and inflated money supply, was now worth much less than its pre-war value. This meant it would never have sufficient gold reserves to meet its debt requirements – a problem that would have been prevented by simply setting a higher value for gold. Further, other countries had to redeem their currencies in pounds and were also therefore subject to overvalued currencies in relation to gold. Though a creditor to the Central Powers, Britain was in debt to the U.S. When the dominoes started falling, all were affected. More fatefully, however, Benjamin Strong – still governor of America's strongest Federal Reserve Bank in New York, an anglophile and a close friend of Montagu Norman, governor of the Bank of England – felt passionately that America should maintain low interest rates in order to stop the gold inflow from Europe – partly to eliminate its inflationary effect in the U.S. and partly to save Europe's own economy.[55]

Ominously, this was the Autumn of Kondratieff's long wave, a time when weakening Old Economies are challenged and speculative bubbles shake out the winners and losers of the New Economy pushing to the surface. During the previous Kondratieff Autumn, 1864–1874, textiles, railway, and coal technologies had challenged wind, sail, and canal technologies. The subsequent Kondratieff Autumn of 1982 to 2000 would culminate in the bursting of the dot-com bubble.

But now, in the 1920s, in the U.S., textiles, coal, and railroads were being challenged by automobiles, electricity, radios, and appliances. Profits since 1922 had risen 22 percent and the stock market along with them. But the stock

markets were rising for other reasons, too. According to George Selgin of the Cato Institute, when, by 1924, low interest rates had failed to stem British gold losses, the Federal Reserve Bank "resorted for the first time to a large-scale open market purchase of government securities as a means for fueling bank expansion and combating deflation."[56] Later, at Montagu Norman's behest, the Fed called for further lowering of regional Fed bank discount rates and increased asset purchases,[57] to which the Dow responded by rising 30 percent in 1928 and doubling by 1929.[58] Europe and the pound sterling strengthened – though, now tied to the gold exchange standard at insufficient valuations, never enough to overcome chronic British unemployment. Meanwhile, back in the U.S., with speculation running amok, not even a rise in 1928 in the discount rate to 5 percent would contain it. Inevitably, given higher interest rates (6 percent in August 1929), building construction, state and local government borrowings, and funds for small businesses declined.[59] By then, Benjamin Strong, the governor of the Federal Reserve Bank in New York, had passed away and New York bankers were profiting from lending, at 12 percent, money they had borrowed from the Federal Reserve at 5 percent.[60] The results of all this monetary manoeuvring cannot have been foreseen by the well-intentioned Lords of Finance. As the governor of the Bank of England, Montagu Norman himself would observe in 1944, "By and large nothing that I did, and very little that old Ben (Strong) did … produced any good effect."[61]

Selgin is more to the point.

> According to several economists, most notably Hayek and Lionel Robbins, the Great Depression began, not as a response to post-1929 deflation, but as the collapse of a prior "malinvestment" boom fuelled by the Fed's easy money policy of the latter 1920s. According to Benjamin Anderson (an American Austrian economist), the Fed "was created to finance a crisis and to finance seasonal needs for pocket cash. It was not created for the purpose of financing a boom, least of all for financing a stock market boom. But from early 1924 to the spring of 1928 it was used to finance a boom and to finance a stock market boom."[62]

Speculation on its own, even when it creates a boom, needn't be a problem. As Simon Johnson and James Kwak observe in *13 Bankers*, their book about the regulatory climate leading to the 2008 crash, growth and prosperity depend on speculative investment in new technologies or new ways of organizing production (Kondratieff's "technics"). It is the large amounts of *borrowed money plus speculation* that produce dangerous financial crises. "Cheap debt makes more

money available to bid on assets, driving up prices, creating vast amounts of paper wealth," they write. "When the market turns, highly leveraged investors can be wiped out quickly, forcing them to liquidate anything that can be sold and causing asset prices to plummet …"[63]

Accordingly, and much like the period leading to the 2008 crash, the anti-regulatory climate of the 1920s made things worse. With little protection and the existence of complex but poorly understood financial vehicles, investors nonetheless used large margin loans to leverage their position. (This is why all those disastrous *margin calls*, money that's been borrowed and which must then be rapidly repaid to the brokers who provided them, are such a big factor in market collapses.)

According to one subsequent Fed chair, William McChesney Martin, had the Federal Reserve removed this "punch bowl,"[64] that is, easy credit, early enough, the crash might have been avoided.

The effects of the October 1929 stock market crash are legion. As prices fell, the payment of margin calls, mortgages, and commercial debt became impossible. Central bankers, being tied to the gold exchange standard at least in name, were unable to supply liquidity to failing banks numbering in the thousands whose depositors, lacking deposit insurance, either withdrew their savings or simply lost them. The effects on the fractional reserve system meant a precipitous drop (to one third of its ratio in 1929[65]) in the ratio of bank deposits to currency in circulation leaving banks unable or unwilling to supply credit to businesses, now also failing by the thousands. The world's major economies were thus blanketed with millions of unemployed and/or homeless people.

And if Britain was in debt to the U.S., the Central Powers, in turn, had major lines of credit to Britain, even as France held large sterling balances it wanted to cash in for gold. When Credit-Anstalt went bankrupt in 1931, the Bank of England – a major creditor – had no choice but to go off the gold exchange standard, a course that other countries then followed. Only the U.S. remained on the classical gold standard, though Franklin Delano Roosevelt would try his own experiment with gold by manipulating its price when he took office as president in 1933. But the de facto devaluation of the pound sterling by the British government, itself a de facto weapon within any trade war, led to competitive devaluations – the lowering of the value of a currency in order to gain a competitive advantage for the nation's exports – around the world. For its part, the U.S. had already passed the Smoot-Hawley Tariff Act in 1930 to encourage Americans to buy domestically produced goods while increasing the price of imports. Inevitably, other countries retaliated, worsening the

Great Depression. When America ceased lending to help rebuild Germany's Weimar Republic, the result was almost 30 percent German unemployment in 1932. In early 1933, Hitler's Nazi Party came to power.

But for the U.S., and with a 10.8 percent GDP growth rate, 1934 would turn into the U.S. economy's best year ever.[66] The election of Franklin Delano Roosevelt in 1933 had inspired confidence and hope. Assuming the anti-bank mantle of Jefferson and Jackson before him, Roosevelt's earliest initiatives included passage of the Banking Act of 1933, otherwise known as the Glass-Steagall Act.

Like Andrew Jackson long before him, Roosevelt wanted to protect ordinary people from the economic and political powers wielded by big banks. His regulatory framework was simple enough. Commercial banks, which handled deposits made by ordinary households and businesses, needed to be protected from failure; investment banks and brokerages, which traded securities and raised money for companies, did not. The Glass-Steagall Act separated commercial banking from investment banking to prevent commercial banks from being "infected" by the risky activities of investment banks. Commercial banks were to be protected from panic-induced bank runs by creation of the Federal Deposit Insurance Corporation (FDIC), but had to accept tight federal regulation in return.[67] Thus reduced to a kind of regulated utility, the banking system created by the Glass-Steagall Act would provide the basis for a half century of banking stability.

If, in 1933, the banking system was stabilized, the monetary issues certainly weren't. Since his election, Roosevelt had been talking about abandoning gold; his Emergency Banking Act, passed on March 9, 1933, even required the surrender of gold coin, bullion, and certificates held by the public, a sting that gold aficionados[68] have not forgotten to this day. Ever concerned about the plight of indebted farmers, whose grain prices had plummeted, he told newspaper magnate William Randolph Hearst that, "If the fall in the price of commodities cannot be checked, we may be forced to an inflation of our currency.[69] He wasn't the first to consider this idea. Indeed, in 1932, under the previous administration, the Fed had been authorized to purchase approximately $1 billion in Treasury securities. The practice would continue and, with short-term market rates 50 basis points or less, the U.S. monetary authorities were well on their way to the nation's first-ever round of quantitative easing by 1933. As Richard G. Anderson, Vice President of the Federal Reserve Bank of St. Louis, recounts:

> Quantitative easing continued during 1933-1936. In early April, 1933, Congress sought to prod the Fed into further action by passing legislation that (i) permitted the Fed to purchase up to $3 billion in securities directly from the Treasury (direct purchases were not typically permitted) and, if the Fed did not, (ii) also authorized President Roosevelt to issue up to $3 billion in currency.[70]

With the Fed purchasing securities in the open market at the rate of $50 million a week, excess reserves increased, as did the Fed's reluctance about this practice. Roosevelt, however, wanted the purchases to continue. In 1933, with reserves of $2 billion at a record high, and short-term money rates at a record low, Federal Reserve officials formally objected and the purchases ceased. As Anderson points out, however, quantitative easing didn't stop. Instead, it shifted to the Treasury and White House through gold purchases. "The Fed's reluctance couldn't be overcome with gold. President Roosevelt controlled both the nation's gold stock and monetary policy, so long as the Federal Reserve remained inactive,"[71] he writes.

Following the theories of two Cornell University academics named Warren and Pearson, whose book charting commodity prices had just been published, Roosevelt decided to reflate the price level by manipulating the gold value of the dollar.[72] He began in April 1933 by removing the U.S. from the gold standard. In August 1933, he recalled all domestic gold holdings into the Federal Reserve Banks. By October 1933, with the dollar down by 30 percent and breaking all monetary conventions, he was buying all the newly minted gold in the U.S. and, when necessary, in the world markets. Daily breakfast meetings held in his bedroom determined that day's price of gold. Herbert Hoover, Roosevelt's predecessor as president from 1929 to 1933, was apoplectic. "We have gold," he complained, "because we cannot trust governments!"[73] According to John Brooks in *Once in Golconda*:

> As to government policy, nations had often before 1933, and have often since then, intervened in the markets to defend the value of their currencies; conversely, over the years they have often deliberately lowered the relative value of their currencies in order to gain competitive advantage. But no nation had ever mounted a systematic attack on its currency, in a time when gold stocks were ample, for the sole purpose of creating domestic inflation and thus helping debtors. They had not done so because the idea was so outlandish it had never occurred to them. If it had, it would have appeared to their economic ministers about as sensible as repeatedly hitting oneself with a hammer so it would feel good when one stopped.[74]

In January 1934, Roosevelt transferred ownership of the gold he had collected or purchased to the Treasury in exchange for (paper) gold certificates. The Gold Reserve Act, passed on January 30, 1934, then raised the value of gold from $20.67 to $35 an ounce and, with it, windfall profits of more than $2 billion for the Treasury. With the Treasury buying gold internationally – between 1934-1936 by some $4 billion worth – an expansion of both the monetary base and bank reserves took place. An exit strategy and concerns about inflation were to be addressed with higher statutory reserve requirements for the banks.

Roosevelt's instincts were being vindicated, at least temporarily. By early 1934, dollar devaluation helped raise prices and reduce interest payments. Businesses were borrowing and consumers were spending. As for gold, its value tripled the value of reserves held by the Fed. Businesses were borrowing and consumers were spending. More gold flowed in from other countries and, as Kondratieff had anticipated, more gold was being produced by the mining industry because, during the "ritardando" of the long wave's Winter phase, higher gold prices made it profitable to do so. Either way, more money was in the system, resulting in a doubling of industrial production and an expansion of GDP by 40 percent – the largest ever during a peacetime presidency.[75]

All this changed in 1937, when the Roosevelt Recession arrived, and the stock market resumed its descent into the trough of the Third Wave. Its causes are widely debated. Was it because of increased taxes? Reduced government spending? A tight money supply? By then, Hitler was on the move. In 1935, his troops occupied the demilitarized Rhineland, while massive spending by the German government in rearmament and public works anticipated the recommendations of John Maynard Keynes's 1936 opus. His *General Theory of Employment, Interest and Money* argued that governments should stimulate their economies by spending their way out of recessions and depressions. In 1940, the U.S. government would begin large-scale military spending, too. By 1945, it would see tens of thousands of new factories built, millions – including women and minorities – employed, and the mass production innovations of the previous two decades mobilized on a scale sufficient to take the economy out of the long-wave Winter that finally troughed in 1949 and reposition it for massive gains in the 1950s.

What monetary policy had thrown asunder, only productive capacity required by the necessities of war could set right. Under the classical gold standard, the world's financial system had, for decades, provided the foundation for relative stability in global markets. By 1919, with Britain, France,

and Germany nearly bankrupt and their currencies collapsing, this system had become one of many casualties of World War I.[76] Attempts by central bankers to restore financial order could not forestall – and ostensibly contributed towards – the arrival of the Great Depression and World War II. Now, a new era and another long wave was commencing its inexorable course.

Or would it? Would the pattern repeat itself? If so, what role would monetary policy play?

The Fourth Wave 1949–1980–2010/20 (trough–peak–trough)

I have spent my strength to persuade my countrymen and the world at large to change their traditional doctrines … Was it not I, when many of today's iconoclasts were still worshipping the Calf, who wrote that "Gold is a barbarous relic"?

–JOHN MAYNARD KEYNES[77]

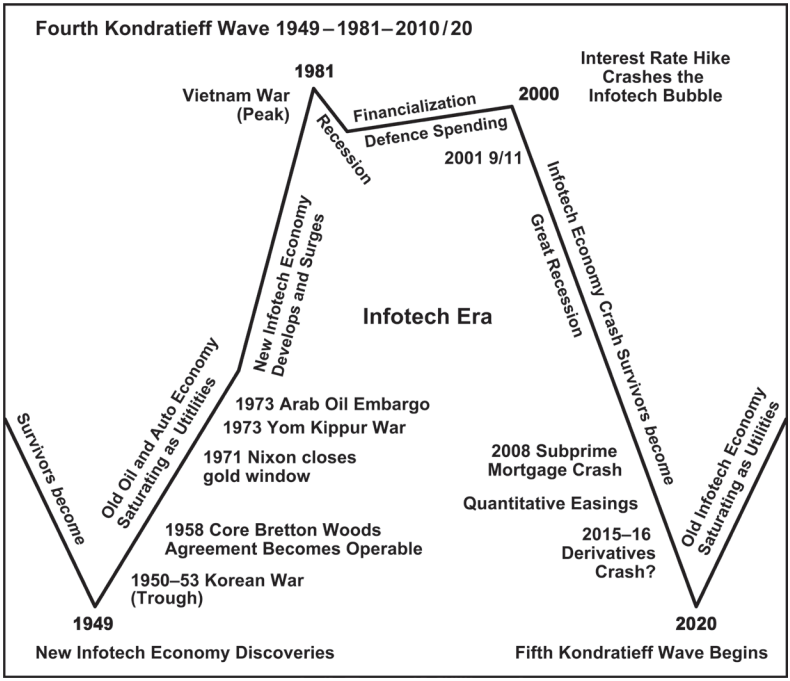

Figure 6 Copyright © 2015 Margret Kopala

Chart of the Fourth Wave[78]

***Key Innovations**: Transistor Radio, Computers, Radar, Nuclear Energy;*

Missiles, Biotech; Genetics, Space Exploration, Limited Liability Company; Venture Capital. ***Key Industries****: Automotive, Armaments, Aircraft, Petrochemicals; Highways, Airports, Airlines, Computers, Fibre Optics, Robotics; Flexible Manufacturing Systems; Ceramics; Data Banks, Informaton Services; Digital Telecommunications Networks; Satellites.*

Determined to avoid the mistakes of the 1920s and 1930s, the victorious World War II allies refused to set punitive damages and instead set about restoring order and industrial capacity to vanquished Germany, Italy, and Japan. The newly created United Nations and the Marshall Plan were signal accomplishments of a world now dedicated to international co-operation and reconstruction.

Equally important was how to deal with questions of economic and monetary nationalism. Prior to World War I, these were aligned on the side of globalization. A universal monetary standard, gold, had been adopted, limiting governments' sovereignty over monetary policy. The benefit was a period of trade liberalization never seen before or since. World War I ended this, while the Great Depression ended the attempt to return to it. "In the 1930s, in the midst of the Great Depression," write Ben Steil and Manuel Hinds in *Money, Markets, and Sovereignty*, "countries returned to the ideas of economic and monetary nationalism, retreating from both free trade and a universal monetary standard. Protectionism went hand in hand with continuous competitive devaluation."[79] World War II was the result of many factors, but economic nationalism was one of the more important ones.

Once again, out of the long-wave trough, a new monetary initiative would be undertaken. In 1944, at the White Mountain resort of Bretton Woods, New Hampshire, delegates from forty-four allied nations met to address three issues. The first was disruption of trade, to which their answer was the General Agreement on Tariffs and Trade (GATT). The second was international finance, both for the purposes of reconstructing Europe and for developing Third World countries. This led to the creation of the World Bank. Finally, they were concerned that the international monetary system was disordered and adversely affecting international trade. John Maynard Keynes, representing the British Treasury, and Harry White of the U.S. Treasury Department, both of whom would die a few short years later, devised the new international monetary system that would prevail for the next twenty-five years.

Confident he understood the lessons of the 1920s and 1930s, Keynes hoped to utilize the strengths of the classical gold standard (containing deficits and providing a standard for international trade), while minimizing its

limitations (its inability to prevent deflationary collapses). But instead of the supranational currency he called the "bancor," which he proposed would use gold as a reference point, thus limiting the ability of the issuer, which he called the International Clearing Bank, to create credit,[80] the assembly adopted the new gold exchange standard with the U.S. dollar as the centrepiece of the new global structure. Holding 75 percent of the world's stock of gold,[81] only the U.S. could convert its dollar to gold at a fixed rate of $35 per ounce. Each of the other countries would convert to the U.S. dollar at a predetermined "legal par value." This allowed some wiggle room for the currency should deflation and unemployment become an issue. And instead of an International Clearing Bank issuing a supranational currency, Bretton Woods, as it came to be known, created the International Monetary Fund – both to ensure the efficient operation of the system and to act as a kind of central bank to governments and central banks with powers as a lender of last resort.[82] Though the role of gold had been formally reduced to convertibility only by the U.S., it also played a role in the IMF, which would receive contributions by member countries consisting of 25 percent gold. Ironically, though gold would continue to play a key if smaller role in the monetary system than originally envisaged by Keynes, he nonetheless defended the Bretton Woods system by invoking his own reference to gold as a "barbarous relic."

Was Bretton Woods successful? The GATT, today called the World Trade Organization, the IMF, and the World Bank remain viable, if increasingly scrutinized, international institutions. However, by 1971, President Richard Nixon had removed the U.S. dollar from its peg to gold and so rendered it a fiat currency – "fiat" because it was no longer tied to a commodity. Why did this happen?

Just as the gold exchange standard was doomed in the late 1920s, the new gold exchange standard created by Bretton Woods was under pressure by the late 1950s. Under the one standard that worked, namely the pre-1914 classical gold standard, funds related to trade and capital moved out of one country and into another. The money supply, therefore, increased in the receiving country and decreased in the sending country. Post-1944, when the Bretton Woods agreement made dollars "as good as gold," dollars sent from the U.S. did not reduce its money supply. Rather, these dollars were left in the U.S. on deposit where, under the fractional reserve system, they were loaned out creating yet more money. In other words, the link between gold and credit no longer existed. The absence of this link had been a factor in the speculation that led to the 1929 stock market crash and was now contributing to

global inflation in the 1960s and 1970s. All that "liquidity," as Anthony Boeckh wrote with regard to reflationary efforts following the 2008 collapse, has to go somewhere.[83] Historically, those "somewheres" have included the 1920s stock market and the 1960s and 1970s consumer price index. More recently, it has flowed into house prices and, according to Steil and Hinds, "rather worryingly for the future survival of our fiat monies, gold."[84]

If massive liquidity was flooding the financial economy, the real economy was faring hardly better. As we learned in chapter two on the debt crisis, though the U.S. enjoyed a position of economic strength immediately following World War II, the responsibility of being the world's creditor nation with the largest supplies of gold would weigh heavily. As Peter Bernstein in *The Power of Gold* details, along with the spending needed to reconstruct the postwar Asian and European economies, private capital seeking profit fled abroad while imports were overtaking America. And, along with unprecedented levels of international economic assistance, the U.S. undertook large-scale social spending and engaged militarily around the globe fighting "two hot wars in Asia as well as the Cold War against the Russians. Before the game was over, Americans would find themselves besieged by their economic enemies and forced by gold onto their knees before their friends," Bernstein writes.[85] By the end of 1960, the U.S. gold stock, steady at $22 billion from 1950 to 1958, shrank by $3 billion … even as foreign ownership of bank deposits in American banks and of short-term U.S. Treasury obligations increased from only $8 billion in 1950 to over $20 billion in 1960. If foreigners at that moment had decided to convert all their liquid dollar assets into gold, the U.S. gold stock would have been exhausted.[86] Worse, by 1968, the U.S. was labouring under a $26 billion deficit but, like his predecessors, President Lyndon Johnson refused to raise taxes to pay for the Vietnam War's escalating costs.

Alert to the precariousness of the U.S. debt situation, gold enthusiasts had been collecting gold as a hedge since the 1950s. By 1961, concerned about the destabilizing effects of such speculation, the major powers pooled their resources and agreed to control the price of gold by selling it whenever the price rose above $35. This exercise in futility ended in November 1967, when the British pound was devalued, the first major currency to do so since the war. When, by March 1969, the massive move into gold that followed could not be dispelled, the London Gold Pool was put out of its misery.

In March 1968, I was preparing for my somewhat (in hindsight) somnolent tour of Europe. The seminal events of the period – the assassinations of Martin Luther King and Bobby Kennedy, anti–Vietnam War protests, the invasion of

Czechoslovakia, strikes and riots in France for higher wages – were woven in a tapestry that included, I have since learned, key financial events. Ron Paul and Lewis Lehrman, in their Minority Report of the U.S. Gold Commission *The Case for Gold*, describe those financial events in detail:

> From March 1968 to August 1971, … the political world pretended that the dollar was still convertible … This was due in part to the moderate lessening of American inflation during the recession of 1969–1970. But after that brief respite, the printing presses again went into high gear … By early 1971, astute financial observers began to sense the imminent collapse of the dollar. One … (sign) … was the lowering of American interest rates compared with European ones. When any nation inflates, money usually becomes cheaper, if only in the beginning, and therefore easier to borrow. The interest rate charged by banks to borrowers and … depositors … also declines … During the beginning months of 1971, the outflow of funds from New York to European money markets (seeking higher returns) accelerated.[87]

With a billion dollars flowing into Germany on May 3 to 4, and another billion on May 5, the German central bank gave up its peg to the dollar and set the mark afloat. Other European countries followed. So far, no country was cashing in its dollars for the U.S. Treasury's gold – partly because, like Germany, they were obliged to the U.S. for providing for their defence needs but perhaps partly, as some believe, because they were acting in the interests of world monetary stability. Speculators, however, sounded the warning bell when in mid-August they started betting against the dollar. As well they might. Already onerous U.S. trade and deficit payments were worsening by the month.

> On August 6, a congressional subcommittee report concluded that the dollar had become overvalued and called outright for an exchange rate realignment. That same day more than $1 billion in gold or other reserve assets were drained from the Treasury, and over that next week, almost $4 billion fled the country … President Nixon responded by declaring international bankruptcy. In a televised address on Sunday, August 15, 1971, he announced that no more gold would be given in exchange for dollars. There were now absolutely no checks on the ability of the U.S. to inflate.[88]

The stage, now, was fully set for the gold bull market of the 1970s. Attempts to fix the dollar price of gold had, in any case, been in vain. Ever alert to the dangers of deficits and the potential for inflation caused by devaluing

the dollar, the price of gold had already reached $41 by May 1968. Between December 1970 and August 13 of 1971, it surged from $37.38 to $43.29 – a 23 percent move.[89] By the end of 1972, it was $64 per ounce.

The closing of the gold window had other unintended consequences. Being priced in dollars, the price of oil felt the full effects of devaluation. OPEC was already considering remedial action when in 1973 Nixon's entry into the Yom Kippur War on the side of Israel provided the trigger. Along with an oil embargo, the price of oil rose by 70 percent, while by December 1974 gold rose to almost $200 an ounce. When inflation and unemployment fell during the mid-'70s, gold lost 43.4 percent of its value. Gold's obituaries were barely off the presses when in August 1976 it resumed its upward ascent. Importantly, the metal could be freely traded. Citizens were now allowed to own physical gold while gold futures commenced trading at the Comex in 1975. Then, in 1976, in Kingston, Jamaica, the Articles of Agreement of the International Monetary System were amended to formalize the floating rate system. The sharp depreciation of the dollar and increase in the money supply that followed extended into 1979 when the Iranian Revolution and the Soviet Union's invasion of Afghanistan saw gold reach the $500-an-ounce range and the International Monetary Fund abolish the official price of gold. By 1980, it was $850 an ounce. Only when the U.S. economy stabilized under "Reaganomics" and Clinton's "New Economy" was the gold bull tamed into a bear market that would last twenty years.

The Bretton Woods system and its vestiges of the classical gold standard, now compromised beyond anything it resembled during its pre–World War I glory years, was ended and a new era, that of monetary nationalism and fully fledged, fluctuating fiat currencies, came into existence. As Jacques Rueff, the highly regarded economist and advisor to French President Charles de Gaulle, would observe, "as long as we do not restore a convertible-currency (i.e., gold standard) system … the world will be doomed to suffer balance-of-payments disequilibriums, monetary insecurity, migrations of hot money, exchange-rate instability, and all the distempers that the ignorance of men and the weakness of institutions can beget."[90]

Gold, on the other hand, had effectively been unleashed from its monetary shackles by the dismantling of the London Gold Pool in 1968. Now democratized and at the disposal of civilians everywhere, it offered a safe haven for their wealth while also holding policy-makers to account for the state of the globe's economies … and their currencies. But if gold, the good genie, was out of the bottle, its evil counterpart, inflation, was also out of the bottle.

FIVE

Papering Over the Cracks: The 'Flationary Crises

The way to crush the bourgeoisie is to grind them between the millstones of taxation and inflation.

–VALDYMYR ILYICH LENIN[1]

Between 1950 and 1975, the U.S. dollar lost 57 percent of its purchasing power.[2] Across a longer period of time, the picture is worse. Since the Federal Reserve was created in 1913, it has lost 96 percent of its value.[3] For those of us who remember a time when a home could be purchased on one income, whereas today two incomes are often needed, these statistics offer one reason why. Unlike hyperinflation, which strikes with devastating rapidity, inflation by stealth occurs over months and years and with few hard questions being asked. Rising asset prices are reassuring as the values of our homes, wages, and stocks rise. But what's the difference between rises in prices that reflect a rise in value and those that are merely inflated? To be sure, price fluctuations that result from issues of supply and demand, or increased productivity, are important market signals and for that reason to be welcomed. Decreasing prices in television sets and computers, at one time so expensive and now so inexpensive, are a good example of how high productivity levels and economies of scale can lower prices. Most of us, however, cannot distinguish when inflation, deflation, and genuine market forces are in play until it is too late.

In the 1970s, there was no mistaking the inflationary forces at work. Nixon's decision to abandon the gold standard led to a massive sell-off of the dollar. Efforts to manage the exchange rate volatility among the major currencies simply broke down. Then, in 1973, the Organization of Petroleum Exporting Countries, representing the world's major oil-producing countries, restricted production, raising the price of oil from $2.11 to over $10 a barrel. This, combined with the devaluation of the dollar, raised prices of foreign

goods and services. Inflation overtook Britain, France, and, particularly, the U.S. By 1979, it was 12 percent, 4 percent higher than a year earlier. As we saw in the chapter on the production crisis, the American manufacturing sector, led by the automotive industry, was peaking by the late 1970s, but systemic weakness was already apparent. Peter Bernstein describes it as follows:

> The tragic loss of competitive position by the American economy in the 1970s was the equivalent of a major military defeat. Inflation appeared out of control, unemployment remained stubbornly high, fiscal policy was a mess, the dollar was approaching a major crisis at the end of the decade, and America's share of world markets was shrinking at a distressing rate.[4]

Paul Volcker, appointed Chairman of the Federal Reserve Board in 1979, applied the medicine necessary to defeat inflation, namely high interest rates, but not without first raising concerns about the possibility of a major blow to the economy, widespread bankruptcies, and the like. The gold market went wild. In January 1980, gold jumped to $634 an ounce and, by the end of the month, hit $850. Only when President Jimmy Carter undertook to "pay whatever price is required to remain the strongest nation in the world" did the temperature cool and gold prices start to decline. By 1985, they were down to $300 an ounce.[5]

In June 1981, a Gold Commission was appointed by the U.S. secretary of the Treasury to consider the role of gold in domestic and international monetary systems. A key advisor to the Commission was Anna Schwartz, economist and wife of Milton Friedman who, in 1971, advised Nixon to "close the gold window." The Commission's recommendation for a reduced to nonexistent role for gold was perhaps predictable, and its report has long since disappeared into obscurity. Only a minority report entitled *The Case for Gold*, from which I have quoted extensively above and again below, remains significant today, most particularly because, in 2010, one of its co-authors, Ron Paul, chaired the Domestic Monetary Policy Committee of the U.S. Congress and, in 2012, sought the presidential nomination of the Republican Party. As a key figure in electoral politics, his observations and those of his co-author, Lewis Lehrman, on monetary issues are well worth reviewing here. Echoing the warnings sounded by Jens O. Parssons and Adam Fergusson in the 1970s, Paul and Lehrman's 1981 book *The Case for Gold* took a hard look at what happens to people and their economy when money is manipulated for purposes beyond its role in tokenizing the process whereby tangible components (labour, resources, services, and goods) combine within the real economy.

Whenever governments are granted power to purchase their own debt, Paul and Lehrman write, they never fail to do so, eventually destroying the value of their currency.[6] Worse, depreciating the commercial standard of civilization, as with the depreciation of moral and legal standards of values, brings chaos and disorder.[7] Working people understand when the dollar is losing its value, so they spend it quickly for a house, a car, an antique, a rare coin – anything real. At best they lend their dollars for short periods to the highest bidder, usually the U.S. government or money market funds, but these do not build factories or hire unemployed workers. What the Fed and politicians have forgotten is the sacred link between the value of the dollar and the value of work. The manipulation of the quantity of money does not create prosperity. Money does not make wealth. Only hard work creates wealth.[8] When money is depreciated, people don't want to save since price inflation is usually greater than the extra interest earned. But more importantly, it is unpredictable. Many figure it is better to buy something this year rather than next (when they will actually need it) when the price will be much higher.[9]

Unfortunately, without true savings, capital formation is impossible. Economic growth depends on savings, not on the growth of the money supply.[10] But with a fully convertible gold standard, the people are in charge and can call the government's bluff anytime they choose by turning in their paper certificates for gold.[11] Between mid-1922 and April 1928, bank credit expanded by over twice as much as it did when it helped to finance World War I. As with all inflations, this caused speculative excess. In 1928, officials, afraid of the overheated economy, tightened the money supply. They were unable to prevent the speculative fever precipitating the Depression, which, in turn, led to the world's abandonment of the gold standard.[12] But the problems of money and the business cycle under the gold standard did not result from the gold standard – rather, it resulted from the inflationary fractional-reserve banking system within it. This inflationary banking system was made possible by the government's imposition of a central bank.[13]

In 1981, Paul and Lehrman made the case for adopting a gold standard as the basis of the American monetary system, arguing it would help maintain consistent low interest rates and provide incentives to save because of its ability to maintain purchasing power. It would also make long-term financing possible and keep federal deficits in check while maintaining full employment, stabilizing prices, and revitalizing productivity and economic growth without increasing the money supply.

The Gold Commission recommended the minting of a gold coin, a

recommendation that was implemented by President Ronald Reagan. As for the dire prophecies of Paul and Lehrman about what would happen in the absence of a gold standard, these were arguably forestalled until 2008. Central bank policies implemented by Federal Reserve Chairman Paul Volcker ended the inflation of the 1970s by raising interest rates, while the next Federal Reserve chairman, Alan Greenspan, lowered interest rates to expand credit, thus adding fuel to the 2000 dot-com bubble and the 2008 subprime mortgage crisis.

Nonetheless, given that American productive capacity had peaked in the late 1970s, what filled the gap between 1980 and 2008, the Kondratieff Autumn of the Fourth Wave?

Microprocessors and Money Processors

Something changed during the last quarter-century.

–SIMON JOHNSON AND JAMES KWAK[14]

Developed in the Third Wave leading to WWI, the oil and auto era matured and diffused in the Summer of the Fourth Wave following WWII, but soon another startling new technology was beginning to change Western societies and, eventually, the world. From the invention of the transistor in 1949, in the Spring of the Fourth Wave, through to the invention of the microprocessor by Intel in 1970, personal computers, the Internet, and mobile phones became the most obvious outgrowths of what was becoming the information and computer technology era.[15] Biotechnology, genetics, and nuclear energy would piggy-back onto the wave. By 1984, 38 percent of U.S. investments was in computers, 13 percent in electronics, and 5 percent in health services.[16] Importantly, the change from a mass-production manufacturing economy to a service and information economy was under way. Peaking of the smokestack industries in steel and auto manufacturing had been followed by deindustrialization and loss of the manufacturing jobs that went with them. Analysts continued to justify the situation with economic theories that placed benefits to consumers ahead of jobs for workers. But growth for the tech sector was assured by yet another organizational innovation. By 1988, $20 billion had been invested as venture capitalists, vetting business proposals, now mediated and became the technological gatekeepers between investor and entrepreneur. Silicon Valley, with $5.3 billion of venture capital committed in 1985, was the obvious beneficiary of the system. But, like all New Economies that sprout from the K-wave Spring and then grow and shake out during its Autumn/

Bubble period, the 1980s became the proving ground that assured its ascent to the dizzying NASDAQ highs that, in March 2000, became the dot-com bubble, the bursting of which ushered in the Kondratieff Winter of the Fourth Wave. Interest rate cuts, which fed the "irrational exuberance" of the 1990s markets, were suddenly hiked in 2000. Like 1929, such hikes are believed to have been the trigger for the dot-com crash. Interest rate cuts following the September 11, 2001 terrorist attacks by the still-controversial Fed chairman Alan Greenspan inflated the subsequent housing bubble that finally crashed in 2008 under the weight of yet another innovation, this time a financial one called subprime mortgages.

A Cauldron of Economic Activity

In Hong Kong in 1997 I spoke at the meeting of the International Monetary Fund and the World Bank and I blamed the financial crisis in east Asia on currency trading. I told them currencies were not commodities and should not be traded. But the World Bank and IMF did not care. They even accorded currency traders such rights as not having to be transparent and not paying taxes. They gave these exemptions in the name of free trade, and yet others had to be transparent and to be subjected to regulations. We concluded that their recommendation would bankrupt us and make us dependent on their loans.

–MAHATHIR MOHAMAD, 2012[17]

During the 1980s, other important developments were taking place that also help explain the situation in which investors find themselves today. For instance, Fed Chairman Paul Volcker may have quenched American inflation with high interest rates, but this had consequences in Latin America, where development projects were being financed by foreign capital. With high debt levels and, now, high interest rates in currencies that were depreciating and so making debt even more expensive, many countries simply defaulted.[18] Luckily, the 1987 stock market crash, a hair-raising one-day 23 percent descent, would be contained though by that time, Japan, where a staggeringly successful postwar economy had stunned the world in the 1970s, was succumbing to speculative mania in its stock market and real estate. That bubble burst in 1990 and, in a dress rehearsal for a fate still possible for Western economies, Japan's Lost Decade, now Two Lost Decades, would witness endless bail-outs "zombify" already insolvent banks and firms.[19] By the late 1990s, some improvements to the Japanese economy were under way although, even now,

nearly twenty-five years later and despite recent and heroic efforts at reflation, land values and equities have yet to fully recover.

Europe's response to the end of Bretton Woods, 1970s inflation, and capital mobility that was now electronically expedited around the globe would be more orchestrated. Central banks and governments were aware of the potent instrument at their disposal called monetary policy. Suspended in a floating system, exchange rate stability was everyone's goal.

Still smarting from memories of how floating currencies contributed to hyperinflation in the 1920s and how 1930s devaluations created problems in international trade, Europe had taken steps to prevent this happening again. This was one of the forces behind the creation of the European Economic Union. It was hoped that, by heightening economic interdependence between Germany and France, they would not be inclined to go to war again.[20] A Common Agricultural Policy and a customs union were in place by the end of the 1960s; the European Monetary System arrived in 1979. A Monetary Union, comprising seventeen of the current twenty-seven EU members, along with creation of the euro and the European Central Bank, would finally arrive in 1998 to form what is now known as the eurozone.

Discrepancies between intent and execution were inevitable. The Maastricht Treaty that created the Monetary Union was hotly debated, defeated, and then repeated in referenda, including in Ireland, which finally joined. The United Kingdom, on the other hand, rejected the euro. Setting aside their preference for monetary independence and the current system of "managed flexible exchange rates," British Prime Minister Margaret Thatcher, along with Nobel Prize–winning economist Milton Friedman, also shared the view that different economies could not mesh under one currency. They worried that the weaker countries would suffer current-account deficits, which would have to be financed by borrowings that must become bigger and bigger as the current account deficit grew.[21] Others, like Paul Krugman, argued that that monetary union is very difficult without fiscal union.[22]

By every available measure taken between 2000 and 2009, from current account deficits to unemployment and wage rates, these divergences between the eurozone's weaker countries, Portugal, Ireland, Italy, Greece, and Spain, and its stronger countries, Germany and France, along with the necessary borrowings have come to pass, pushing the constitutional envelope of countries like Germany to find a fiscal and monetary response to the situation. In June 2011, Greece broke out in riots as a default on its debt seemed all but assured and its future in the European Union thrown into doubt. Following

bailouts of Greece, Ireland, Portugal, and Spain, a full-fledged crisis enveloped Cyprus in March 2013 as exposure by its banking sector to Greek debt placed it on the brink of default. When bailout terms from the ECB, IMF, and the European Commission, or the Troika, as these came to be known, included a levy on uninsured depositors, a wave of consternation swept the globe as it became clear that these kind of "bail-in" mechanisms might apply everywhere.

Still, Nobel Prize winner Robert Mundell, widely regarded as the father of the euro, stood by his theory of the Optimum Currency Area, a powerful force in the creation of the EU. "Never before has there been a currency union that covers so large a share of the world economy and that has grown so successfully and so rapidly within the space of a decade and a half," he told the *Financial Post* in June 2012.[23] Second in size only to the dollar currency area created when Nixon abandoned the gold standard in 1971, it has become so important that swings in the exchange rate between the two have aggravated financial problems everywhere, including in 2008, when the euro reached a high of $1.64 against the dollar. Echoing Jeff Rubin's major concern about the price of oil, Mundell added: … the dollar-euro exchange rate, along with the price of oil, is one of the two most important prices in the world. A high dollar results in deflation and recession in dollar-fixed countries; a low dollar brings inflation and currency speculation. Of course, the euro can be improved. Deficit adjustments and financial fires must be quenched but, mostly, two great defects must be addressed: first, the existence of seventeen banking systems and, second, seventeen nations with treasury bills and bonds, he wrote. "Correction requires a jump in European leadership and public acquiescence toward a shift of sovereignty from the nation-states toward the centre.[24]

In other words, with Latin American currencies imploding, the eurozone coalescing, and Japan in an asset bubble, the world was a seething cauldron of economic activity. And now globalization was pulling China into the mix. Its inexpensive exports flowed readily to the consumer economies of the West. In two decades, average Chinese salaries rose from $525 a year to $5,000[25] – still nowhere near the purchasing power of Americans languishing in what has been called the Greater Depression, but significant nonetheless. But in a country where, as I learned anecdotally,[26] ambitious young Chinese men covet the ability to speak English and to own both a car and a computer, it isn't surprising that its growing service sector is the preferred destination of global capital.[27] Despite a manufacturing base that had been eroded by the global downturn, service sector items such as computers and real estate became big consumer items, as did car purchases. In 2010, for instance, General Motors sold more

vehicles in China (2.35 million cars and trucks) than it did in the U.S. (where sales were 136,000 fewer).[28] China is now the world's largest car market, with more than 1,000 new cars being purchased every day in Beijing alone.[29] And this is just the beginning of the demand for cars. While China's economy grew 10.3 percent in 2010,[30] the activities of its banking authorities and sovereign wealth fund are equally notable. China possesses $3 trillion in foreign assets, mostly in American dollars, and is diversifying into the world's commodities and resource sectors.[31] Moreover, it is now lending more money to other developing countries than the World Bank, which had already achieved record levels of lending because of the credit crisis. According to the *Financial Times*, "Beijing is forging new patterns of China-led globalization, as part of a broader push to scale back its economic dependency on Western export markets."[32]

In 2009 and 2010, loans advanced by the China Development Bank and China Export-Import Bank totalled $110 billion – a figure one CDB advisor cautions is understated. In addition, the Chinese are buying European Financial Stability Facility bonds which will finance bailouts in the eurozone.

In the same period that witnessed the beginning of China's rise, Sweden's and Finland's banking systems both collapsed as a result of a decline in Russian demand for their goods after the end of the Cold War. In 1994, it was Mexico, with its overvalued peso and runaway deficits. By 1997, these problems, culminating with the Asian financial crisis, were systemic among emerging nations. In 1998, the Russian government defaulted. Among other casualties, it caused a crisis at Long-Term Capital Management, a prestigious $4 billion American hedge fund. With principals that included, among others, two Nobel Prize–winning economists, Myron S. Scholes and Robert C. Merton, Long-Term Capital Management had placed large bets on foreign government bonds, including Russian bonds. Nouriel Roubini, a specialist in credit crises who famously anticipated the 2008 credit crunch, concludes that "a speculative boom and excessive accumulation of debt stood at the centre of many of these crises."[33]

Something, indeed, had changed over the last quarter century. That such events were taking place in international finance came as something of a shock to the financial naïf in me. People in those countries clearly underwent major financial and other types of duress, while I remained blissfully economically ignorant in the cocoon of Western society. Perhaps these countries were all "too small to matter." Only when such events take place in a country that is "too big to fail" do the rest of us take notice or feel the consequences, as became all too apparent in 2008.

Wall Street Takes Over

The expansion of the financial sector vastly outpaced growth in households and nonfinancial companies … (due to) the "financialization" of the economy – the transformation of one dollar of lending to the real economy into many dollars of financial transactions.

–SIMON JOHNSON AND JAMES KWAK[34]

In the 1970s, annual U.S. auto sales peaked at figures approaching 15 million units. Such numbers would be approximated in 2013 but, relative to population increases of over 150 million from the 1970s to early 2000, they were in absolute decline.[35] Similarly, between 1979 and 2007, according to the Economic Policy Institute, "income growth (had become) concentrated in the top 20 percent of income distribution, with most of it going to the top 5 percent," whereas "from 1947 to 1979, income growth was relatively uniform across income distribution."[36]

The late 1970s were very important for another, very much related reason. By then, the financial sector had taken off. In 1978, commercial banks held $1.2 trillion in assets or 53 percent of U.S. GDP. By 2007, they held $11.8 trillion in assets, or 84 percent of GDP. In 1978, asset-backed securities hardly existed yet, by 2007, they accounted for $4.5 trillion in banking assets, or 32 percent of GDP. In 1978, debt held by the financial sector was $2.9 trillion, or 125 percent of GDP; in 2007 it was $36 trillion, or 259 percent of GDP. In 1978, John Gutfreund became the CEO of Salomon Brothers; by 1985, he was known as the King of Wall Street.

Salomon Brothers was the epitome of the new breed of Wall Street investment bank. It was built around a swashbuckling, risk-taking, bond trading operation powered by "quants" recruited from academic research institutions and filled with "financial engineers" designing new products. Its strategy was to take large risks on its own account rather than simply taking fees for providing advice or executing trades.[37] Salomon Brothers would become the subject of the seminal financial book and movie of the era, financial journalist Michael Lewis's *Liar's Poker*, and film director Oliver Stone's "greed is good" *Wall Street*.

In other words, from 1978 onwards, Wall Street assumed control of the economy. The financial sector was now expanding at a rate far greater than expansion in households and nonfinancial companies – that is, the "real economy" where real products are made and sold. In 1978, the financial sector borrowed $13 for every $100 by the real economy. In 2007, it borrowed $51

for every $100 in the real economy – almost quadruple the original amount. And this did not include derivatives, a financial "product" – bets on the value of other assets – that did not exist in 1978 but which, by 2008, according to the Bank for International Settlements, was double U.S. GDP at $33 trillion.[38]

Salaries also grew. A big bonus of $800,000 for an experienced trader in the 1980s became $10 million in the 1990s. Hedge-fund managers were the real winners. In 2007, five of them earned $1 billion or more. John Paulson, the foremost among them, "made $3.7 billion successfully betting against the housing market and the mortgage-backed securities built on top of it."[39]

What changed? As the former dean of the MIT Sloan School of Management Lester Thurow puts it, "The mathematical sophistication intensifies as an understanding of the real world diminishes."[40] And, as a former investment banker ruefully acknowledged in 2009, "When I came to Wall Street in 1954, it was a profession, one that financed the building of this country's industrial capacity and infrastructure."[41] Back then, the banking sector facilitated transactions in the real economy and complied with the Glass-Steagall Act. Forged from the miseries of the Depression era, the legislation separated investment and commercial banking. Along with federal government deposit insurance for commercial banks, came strict government regulation as well. Under such laws, investment banks and brokerage houses invested in the production of real goods and services, and the postwar economy flourished as technological innovation fuelled the automotive, household appliances, and defence-manufacturing industries. Buoyed by a new financial vehicle, venture capital, similar advances in the development of computer mainframes and minicomputers were also under way – that is, Kondratieff's "technics" that would seed the next New Economy, this time in information technology.

But in the 1980s, Johnson and Kwak explain, the economy was shifting and, along with it, pressure to dismantle regulatory restrictions increased. High inflation in the 1970s meant banks did not make any money on mortgages while homeowners, whose debts were inflated away, regarded their houses as investment vehicles. Meanwhile, important economists like those at Long-Term Capital Management had developed sophisticated mathematical models to help penetrate and capitalize on complex financial issues. The Black-Scholes Model, devised for calculating the price of a financial derivative, for instance, helped inspire the derivatives revolution, while the Efficient Market Hypothesis, which posited that markets always produce the right asset prices, became the justification for financial deregulation and, eventually, free movement of capital. Thus a growing demand for deregulation, begun under Jimmy

Carter, was "transformed into a crusade by Ronald Reagan."[42] Glass-Steagall, legislation that had kept the banking system safe since the Depression, was slowly chipped away until it was repealed by the Gramm-Leach Bliley Act of 1999.

This opened the floodgates to an "orgy of product innovation"[43] and a financial sector that soared. Hedge funds and university endowments bought holus-bolus into the structured finance market. The dizzying array of products included variations on the theme of pure derivatives (over-the-counter interest rate, currency, and credit default swaps which, for the investor, was a side bet on other financial assets and a form of insurance against default) and asset-backed securities (mortgage-backed securities and collateralized debt obligations which included assets besides pooled mortgages such as credit card debt, and auto and student loans). By 2005, now on a par with the best of the manias, including the 1637 Dutch tulip mania that saw mad crowds paying large sums for worthless assets, mortgage-backed securities and collateralized debt obligations commanded the investment heights.

Yet even in 1989, as the Communist bloc began its collapse and the End of History and Free Market victory were declared, it was apparent there was something rotten in the state of capitalism. Already, the bright and the beautiful, inspired by Oliver Stone's "greed is good" movie, *Wall Street*, were flocking to Ivy League universities to acquire the financial engineering credentials necessary for consuming guacamole from five-gallon tubs while trading futures at Salomon Brothers. By then, Michael Milken had grown a liquid market for junk bonds – that is, bonds that do not earn an investment rating from credit agencies – from $6 billion in 1970 to $210 billion. Now he was under investigation for insider trading, securities manipulation, and fraud.[44] In addition, the savings and loan crisis, in which more than two thousand banks failed – the most since the Great Depression, was under way. Along with hundreds of fraud convictions, this cost U.S. taxpayers $100 billion. In 1991, a Saudi prince bailed out Citibank and, in 1994, California's Orange County lost $2 billion on a securities fraud transaction using derivatives. Yet when, in 1998, Long-Term Capital Management (LTCM) collapsed and had to be rescued, still no one saw the writing on the wall. The LTCM scandal revealed the essence of a problem that, in addition to having put the global banking system in crisis mode, may yet destroy America. With about $4 billion in capital that allowed borrowings (leveraging) of a further $130 billion, along with acquiring seven thousand open derivatives positions with a face value of $1.4 trillion,[45] LTCM

had created the world's most prestigious hedge fund.[46] It did so by using complex mathematical models – but as with all mathematical models, these could not anticipate wild-card events. When an emerging markets crisis put LTCM on the verge of insolvency, with $130 billion of collateral damage that could redound throughout the whole of the banking system, "too big to fail" bailouts and moral hazard became entrenched in the financial system.

LTCM and later failures such as Enron and WorldCom were all closely linked to financial deregulation and innovation, write Johnson and Kwak, but instead of tightening the system, Congress passed the Gramm-Leach-Bliley Act of 1999, which overturned anything that remained of Roosevelt's regulatory legislation of the 1930s. The pump was now truly "primed" for subprime lending.

Housing Woes

… the more money that flowed into new subdivisions in the desert, the less flowed into new factories where Americans could go to work.

–SIMON JOHNSON AND JAMES KWAK[47]

Wall Street, however, was not the only consenting adult in the orgiastic street party. After all, all those mortgages had to come from somewhere, and the White House and Congress were only too happy to oblige. Both President Bill Clinton and President George W. Bush approved lending targets of up to 56 percent to low-income homeowners by Fannie Mae and Freddie Mac – private corporations mandated to provide liquidity to the housing market. In 2002, minority borrowers held $1.1 trillion in such loans. Thus aided and abetted by an inflated money supply, a mistaken belief that financial innovation, like technological innovation, was always a good thing, a toxic mix of economic assumptions combining finance and home ownership, and low interest rates that had also fuelled the dot-com bubble under one of America's most controversial central bankers, Alan Greenspan, the inability of minority owners to maintain payments of complex mortgage arrangements would prove to be the wild card that upset all the mathematical models behind the subprime asset-backed mortgage market. The ensuing financial crash turned me and millions of others into victims.

Trillion-dollar losses weren't the only cost of the housing bubble, Johnson and Kwak conclude. Economic growth and household income also suffered. Housing prices increased 77 percent between 2000 and 2005, but business

investment in equipment and software was lower than in the 1990s. "And the more money that flowed into new subdivisions in the desert, the less flowed into new factories where Americans could go to work."[48]

At the time of writing this chapter, in 2013, the American, Irish, and Spanish housing sectors remain depressed while unemployment figures remain stubbornly high. The use of quantitative ("quantity" of money) easing – the process by which governments buy their own bonds to supply "liquidity" – is creating its own risks, including an inflated stock market that was approaching its 2008 highs, and inflationary pressures in emerging markets. Most alarmingly, issues around over-the-counter derivatives remained unsolved. Writing in *A Pocketbook of Gold*, precious metals specialist James E. Sinclair and commodity broker Peter D. Carlin describe the potential devastation these factors may bring:

> The monetary aggregate created by these opaque, uncleared instruments is so large now that hyper-inflation appears to be the only way to try and forestall the threat of an economic, deflationary death spiral. Central Banks are trying hard to do this, and with good reason. If the true value of OTC Derivatives were properly assessed, every market in the world would close the next day. FASB and BIS[49] are aware of this and are assisting in the suspension of proper valuation in the hope that inflation may whittle down some of the size of the problem, before markets demand a proper valuation.
>
> The massive issuing of OTC Derivatives has created a new, untested, unregulated, non-transparent, monetary aggregate, without rules and without a history. This is not good. With over $1 quadrillion worth of OTC Derivatives, some of which are worthless, managing the problem is a monumental task that will need a monumental amount of inflation. $200 trillion of this problem sits on the balance sheet of just five U.S. Banks. Even a small default rate could kill most of the world banking system. As Harry Schultz reminds us: "If 4% of derivatives are 'at risk' and 10% of those bets go bad, you've wiped out all of banks' equity and they go to zero."[50]

Sinclair and Carlin conclude that living standards in the Western world have peaked "for decades to come" and that the banking system, if it survives, "will be significantly changed." Taxpayers will pay, and at a high political cost, just as taxpayers in other hyperinflationary economies before them have paid.

Reflating, Deflating, Inflating …

Inflation is always and everywhere a monetary phenomenon.

–MILTON FRIEDMAN[51]

As Sinclair and Carlin suggest, it is the deflationary spiral that U.S. Federal Reserve Chairman Ben Bernanke hoped to avert by "reflating" the economy. A disciple of economist and Nobel Laureate Milton Friedman, perhaps the most influential economist of the last half of the twentieth century, Bernanke adopted Friedman's monetarist views, namely that while "inflation is always and everywhere a monetary phenomenon only in the sense that it is and can be produced only by a more rapid increase in the quantity of money than in output,"[52] in a deflationary collapse, it is necessary to supply liquidity. Fearing a deflationary collapse, between December 2008 and March 2010, the Fed purchased $1.35 trillion in mortgage-backed securities and $300 billion in Treasures in round one of its quantitative easing program (QE1).[53] Round two (QE2), announced in November 2010, committed another $600 billion. In September 2011, Operation Twist went into effect, a process whereby the Fed would sell its short-term bonds in order to purchase $400 billion of longer-term bonds. When in September 2012, a third round of quantitative easing was announced that would keep interest rates ultra-low well into 2015 with unlimited purchases of $40 billion per month in mortgage bonds as well as $45 billion in Treasury bonds through the end of the year,[54] a collective sigh of relief went up in the bourses of the world, which by now were hooked on central bank liquidity to keep stock prices and other assets rising.

Many, however, were starting to worry that the printing of so much money would only lead to hyperinflation on a scale experienced by the Weimar Republic, or at least a Japanese-style lost decade or two, as continued stimulus spending and quantitative easing zombify not only the banking system but also the economy. Worse, and also like Japan, the Western world is facing a demographic crunch. Aging populations and imprudent immigration policies mean higher demands on social services, pensions, and other entitlements even as such populations no longer create the wealth that pays for these benefits.[55] Even so, highly regarded economists like Ken Rogoff were calling for even more reflatory efforts sufficient, at least, to promote inflation levels of around 4 percent. Quoting William McChesney Martin, the Fed chairman in the 1950s and 1960s who famously stated that the job of the central bank is "to take away the punch bowl before the party gets started," Rogoff replied that "this is no ordinary recession, and a lot [of] people have not had any punch

yet, let alone too much. Yes, there are legitimate technical concerns that QE is distorting asset prices, but bursting bubbles simply are not the main risk now. Right now is the U.S.'s best chance yet for a real, sustained recovery from the financial crisis. And it would be a catastrophe if the recovery were derailed by excessive devotion to anti-inflation shibboleths, much as some central banks were excessively devoted to the gold standard during the 1920's and 1930's."[56] Still others, such as Larry Jeddeloh of TIS Group, believe global inflationary and deflationary forces are coexisting. An Irish depression and Asian inflation are under way simultaneously. Similarly, in the commodity sector, and government services, there is inflation even as deleveraging in America, low-priced Chinese exports, and high debt and technological advances that replace human labour are deflationary and affect calculations for the consumer price index. And, as long as the U.S. dollar remains the world reserve currency, debasement by printing money will prove to be inflationary on a global scale. When and how much printing will it take before inflation hits? "The forces of deflation in this Kondratieff Winter, massive dollar funding of banks around the world, globalization of trade and the scale of debt deflation which is coming all make us think the number is in the trillions and it may be well over $10 trillions,"[57] Jeddeloh wrote in 2011. Meanwhile, continued bailouts in Europe were setting the stage for the next, bigger crisis. Little wonder then, that Ben Bernanke's announcement in May 2013 that "tapering" of asset purchases might commence in the foreseeable future was met with a massive tremble in the global stock markets.

As for the international monetary system, the call to reform the current ad hoc system, which since 1971 has allowed countries either to float or to peg their currencies to another, is muted but nonetheless under way. We can be sure that, just as previous long-wave troughs produced major monetary reforms, the trough of the current K-wave will spawn reforms. And, indeed, some broad strokes are emerging. Political economist Robert Skidelsky, in *Keynes: The Return of the Master*, sees global reserves, with 63 percent in U.S. dollars, as the main problem. Given the wild capital flows being facilitated by globalization and digitization, many countries use these reserves as a form of insurance against capital flowing out of their countries, even as it allows them to keep their own currency undervalued and exports, employment, and growth high. This explains how the "savers" of Asia came to be the creditors of the "spenders" of the West, a problem George W. Bush identified on November 13, 2008, when he addressed the Manhattan Institute. All those savings from hard-working Asians had to be invested somewhere, but what Bush did not

acknowledge was the fact that they *weren't* being invested. Instead, thanks to the fractional reserve banking system, they were used to create cheap money to fuel an explosion in the housing and derivatives markets or simply to feed entitlement spending. Properly invested in American productive capacity, Skidelsky explains, these Asian savings might have produced the profits necessary to sustain markets and entitlement spending. Thus, as Martin Wolf, chief economics commentator at the *Financial Times*, described it, "the savings glut … might be better thought of as an investment dearth."[58]

Today, the Chinese are themselves addressing their "reserve" problem by using their dollars to buy assets, particularly commodities, around the world – a development that would shock Keynes who first and foremost believed in investment, by government if necessary, to maintain full employment and who was very wary of foreign investment and lending because they would "'set up strains and enmities in times of stress."[59] Thus he – and, now, the Keynesian school of economists – called for ways to curb, in effect, the hoarding of reserves through international agreements that might include the imposition of a tax or other controls on hot money flows, or agreement on exchange rates. French President Nicolas Sarkozy, chairing the G20 in 2011, was particularly enthusiastic about the imposition of an international financial transactions tax (FTT), popularly known as the "Robin Hood Tax."

Discussion about a new reserve currency is also under way. James G. Rickards, Senior Management Director at Tangent Capital Markets, a key player in the cleanup of the LTCM catastrophe and author of *Currency Wars*, stands out as a purveyor of no-nonsense analysis on this subject. With his characteristic low-key, rapid-fire command of the facts, he explained to the Kinnear Financial Spring Conference in 2011 how, given unsustainable debt levels, declining levels of consumption and investment, and the exhaustion of monetary and fiscal stimulus, the U.S. has no choice but to prop up GDP numbers by encouraging exports and, in fact, doubling them as promised by President Barack Obama. This means cheapening the currency, which in turn means printing money or, quantitatively easing. This has the added effect of lowering the real interest rate. Moreover, by dialling up the money supply, the Fed, which is responsible for such things, dials up the GDP. According to the Quantity Theory of Money, he explained, MV = Py, that is, the quantity of money (M) times the velocity of money (V) equals the price index (P) times real GDP (y). Trouble is, governments cannot control velocity (V), which depends on human psychology. If no one wants to borrow or lend, you don't get much in the way of velocity. Hence the need to keep the printing presses

going to make up the difference. But, says Rickards, with reasoning reminiscent of Rees-Mogg and Davidson, this is linear thinking in a non-linear world. Worse, it is playing with fire. Indeed, playing with fire is a good analogy. How many people need to leave the theatre before someone shouts fire? Or how many people need to stop using the dollar before everyone stops using it? Fortunately for the U.S., it is a gold superpower, if it cares to put that power to use. Applying the Bretton Woods formula for a reinstatement of the gold standard, namely 40 percent backing of M1 (the sum of loans and chequing accounts), the price of gold would be $4,000 per ounce and suddenly sovereign debt problems don't look so bad.

Is a return to the gold standard likely? Rickards thinks not. Governments will print money and attempt to manipulate psychology and the velocity of money instead. After all, printing money encourages inflation. A mere 4 percent inflation rate reduces the value of the dollar (and the debt) by half within seventeen years. Never mind that this approach flirts with creating hyperinflation and social instability. A study of how to reinstate the gold standard should be undertaken, argues Rickards. Like the euro, which took ten years to establish, it would take five years or so to do the technical work and to think about the issues. We need to know how to avoid the great blunders in economic history, such as when, in 1925, the world picked the wrong price for its return to the gold standard. Having printed so much money to finance World War I, resuming the old price meant deflating the money supply, which meant England was in a depression ten years ahead of the Great Depression. Setting a high price might have been inflationary, but it might also have averted the Great Depression altogether. Still, experts persist in blaming the gold standard for the Depression when the fault was not gold but the failure to pick a realistic price.

Concerned about the civil cost of printing money, along with efforts to boost velocity and manipulate psychology and expectations, Rickards then outlined the four most likely scenarios for a new monetary system from the most to the least benign.

First up there is Multiple Reserve Currencies or The Kumbaya World, which would involve the gentle decline of the dollar as a percentage of global reserve assets from 61 percent to 45 percent, while the euro and the Chinese yuan go up. Everybody lives happily ever after. The problem is, this does not solve any of the problems. You still have what's called Triffin's Dilemma: A paper-based system for the reserve currency requires liquidity, which means somebody has to run deficits to supply liquidity to the rest of the world. Even

spreading the deficits around means the deficits and the surpluses cannot all be shared equally, so the problem expanding the global money supply in a paper currency world isn't solved.

Special Drawing Rights (SDRs) is the second option. The IMF already issues a basket of these. When the Fed can no longer deal with financial panics, the G20 will direct the IMF to perform its own version of quantitative easing by supplying liquidity in the form of SDRs.

Third, gold. To stabilize prices, increase savings, and get a good store of value, Rickards recommends returning to a gold standard. It would take a lot of study, he said, but he does not think it will happen.

The fourth and most likely scenario is chaos. Having crossed the tipping point without a more sustainable system likely means the use of coercion. Under the International Emergency Economic Powers Act of 1978, the president of the U.S. has dictatorial powers to deal with an economic emergency, such as freezing Gadaffi's assets and Iranian assets. But, like Roosevelt and Nixon, he can freeze gold, suspend gold convertibility, and establish an exchange rate between the dollar and gold, or just ignore gold completely and put it on price controls, or capital controls, or freeze assets. In extremis, Rickards believes the U.S. will confiscate the European gold that's on deposit in New York. The U.S. has 8,000 tonnes and the Europeans have 6,000 tonnes – but their gold is in New York, so it is vulnerable. The president could confiscate that and give the Europeans an IOU saying we'll get back to you once we figure out what to do next.[60]

Given the scenario described by Rickards, the German government, headed in 2011 by Angela Merkel, understandably balked at the prospect of bailouts to eurozone countries that required greater amounts of "liquidity." Weimar Germany was devastated by hyperinflation in the 1920s, so no German could, in good conscience, countenance behaviours that risk such an outcome again. For that primary reason, the European Central Bank has no mandate to print euros; it can only try to maintain price stability. But if, as Rickards describes it, the IMF picks up the slack and issues SDRs, its current head, Christine Lagarde, a former French finance minister, could well prove to be Merkel's nemesis. In that eventuality, would Merkel, could Merkel, play the gold standard card? In one important sense, a step in that direction was taken by the German Council of Economic Experts in November 2011 when it outlined its European Redemption Pact,[61] an idea that was gaining support into the summer of 2012. It would issue eurobonds to cover eurozone members' individual debts in excess of 60 percent of GDP, provided they did

so according to strict rules, including the provision of gold backing for their bonds. Similarly, Barack Obama's win in 2012 of a second term as president does not preclude the Republican majority in the House of Representatives creating a Gold Commission to study gold's role in any changes to its Federal Reserve system.

In any case, the proposal by John Maynard Keynes at Bretton Woods for the creation of an international reserve currency backed by a gold reference point may yet be revived. Writing in the *Financial Times* in November 2010, World Bank President Robert Zoellick proposed a similar idea, one that had already been articulated in April 2009 by Zhou Xiaochuan, Governor of the People's Bank of China. Referring to Keynes's "far sighted" plan of 1941, he proposed that a "super-sovereign reserve currency" be created and be developed from the IMF's Special Drawing Rights which would replace national reserve currencies.[62] Like Rickards, Skidelsky believes that today's current account imbalances not only underlie recession/depression but also lay the groundwork for currency wars. Unlike Rickards, who sees SDRs as a stand-alone proposition, Skidelsky explains how Keynes's 1941 proposal for the creation of an International Clearing Bank (ICB) replete with penalties for persistent credit and debit balances, the creation of a new international reserve currency called the "bancor," plus a gold reference to limit the capacity of the ICB to create credit, would contain the problems of stand-alone Special Drawing Rights.

Something New?

The Keynesian tools are not infinitely self-refreshing … We have to try something new … Austrian or what not … just something new. A massive game changer.

–DEAN LEBARON[63]

That there is a great deal of superior analysis of the ills that plague the global economy goes without saying. Sector analysis – that of Johnson and Kwak, for instance, who make the case for better regulation of the financial system; or Benn and Steil, who argue against monetary nationalism; or Ron Paul, Lewis Lehrman, and, now, James Rickards, who promote a 100 percent gold standard; or Jeff Rubin, who thinks that high energy prices will destroy globalization – adds greatly to an important part of the picture.

But John Budden had insisted that I obtain a view "from ten miles up." With my head already buzzing from the breadth and depth of the issues facing

the global economy, it was a "tall" order, to say the least. Although many investors make money by simply understanding the micro situation – that is, a particular stock, or sector, or aspect of the economy – understanding the macro provides the context that explains the behaviour of an asset class. How well do base metals perform in an economy that isn't building anything? Or energy in a world where goods are no longer being transported because consumers are tightening their belts? Will aging demographics keep health-care stocks high? Who wants the bonds of an insolvent nation?

And even within that overarching view and confluence of events (Kondratieff's "conjuncture" theory) that comprise long-wave cyclicality, I learned that we must allow for human fallibility and forces beyond human control before it becomes truly intelligible. Every investor needs every bit of information he or she can muster from as high up as they can go. Today's challenges demand nothing less, because today the view from ten miles up is not pretty.

"What if there are no policy remedies for a debt deflation? What if the speed and magnitude of the Great Depression's contraction served to clear the market and allow the U.S. to come back stronger?" asked Hugh Hendry of the Eclectica Fund.[64] Ludwig von Mises' observation seemed more to the point: "There are no means of avoiding the final collapse of a boom brought about by credit expansion. The only alternative is whether the crisis should come sooner as a result of voluntary abandonment of further credit expansion, or later as a final and total catastrophe of the currency system involved."[65]

A Built-in Crisis

The main thing we miss today is universal money, a standard of value, the link between the past and the future and the cement linking remote parts of the human race to one another.

–ROBERT MUNDELL[66]

Nikolai Kondratieff believed that crisis is built into the capitalist system. Nathan Mager, writing in 1986, explained that, although Kondratieff was knowledgeable about the economic theories of his time, the "general theory and monetarism were not widely understood or widely accepted by contemporary analysts of economic cycles."[67] Government deficits were being used, but they were also deplored; Germany's 1920s hyperinflation was viewed as a declaration of outright bankruptcy, for instance. Even so, Kondratieff's use of interest rates as one important factor in his hypothesis more than suggests

his appreciation of monetary pressures as a factor in economic expansions and contractions. And, though Kondratieff dismissed the production of gold, which was, at that time, the basis of the money supply, as an explanation for long cycles, his theoretical model of the major cycles has been viewed as a theory of investment cycles of long duration[68] in which "an increase in gold production may be a prerequisite to a rise in commodity prices and an upswing in economic conditions generally (but that) gold production itself is, in its turn subordinate to the rhythm of the long cycles in economic conditions and hence cannot be regarded as a random, adventitious factor in the latter."[69] Again, this thinking would apply to monetary policy during the era of the gold standard when the money supply was tied to the gold supply. Mager concludes that, like Keynes, Kondratieff appreciated that spending stimulated expansion, but that the motivation for an authentic upswing existed in innovation ("technics") while Keynes focused on deficit spending. Later, Milton Friedman would target easy money.

Writing in a similar vein, in 1998, Kondratieff biographer Vincent Barnett shows how Kondratieff used the Quantity Theory of Money, a theory that dates back to 1802, to explain the hyperinflation of the ruble in 1922 and how he blamed credit expansion for the disproportion between urban purchasing power and the supply of ready-made consumer goods that was evident in Russia's "goods famine." Barnett concludes that Kondratieff's monetary theories suggest an affinity for the ideas of R. G. Hawtrey, a British economist and friend of Keynes, who observed that "in a capitalist economy … adjustments in the rate of interest always tended to lag behind the rate appropriate for any specific instant," and F. A. Hayek, who explained that "when the volume of money in circulation was elastic 'there may exist a lack of rigidity in the relationship between saving and the creation of real capital.'" For Kondratieff, "the provision of credit without genuine savings would inevitably lead to just the sort of crises which had been seen in the Soviet economy."[70]

Indeed, avoiding short-term pain merely prolongs the agony and risks making it worse. As gold expert and Sprott Asset Management's chief investment strategist John Embry observes, this is exactly what is happening. "Any serious attempt to withdraw the stimulus at this point will trigger a deflationary depression and a continuation of the current policies will put us firmly on the road to hyperinflation."[71] In other words, one way or another, there is more economic pain ahead. But, once the healing begins, someone's economy, if not that of the U.S., will be restored, stronger than ever, because if the British and Americans each experienced Kondratieff cycles, perhaps now it is someone

else's turn. As the West struggles with economies predicated on entitlements invoking memories of post–World War I Europe, horrendous debt and imprudent regulation must assuredly hasten the demise of the U.S. dollar, now in precipitous decline. In his April 2011 newsletter, Toronto investment dealer Murray Pollitt added: "There is a real chance the euro will hit the wall in a few years. And Japan's problems make the yen look very vulnerable. In fact, hardly a currency in the world looks 'safe' yet trillions have been wagered on one currency or another."[72]

Hegemonic Change

The trouble with paper money is it rewards the minority that can manipulate money and makes fools of the generation that has worked and saved.

–GEORGE GOODMAN[73]

Post 2008, none of the major currencies, whether in deflationary or inflationary mode, looks very good. To the lay person, like myself, it seems inevitable that something will break. What might that be? On the one hand, economists like Milton Friedman advised Nixon to abandon the gold standard in favour of monetary sovereignty. Later he would explain that exchange-rate flexibility was a nation's best defence against the monetary mistakes of other countries,[74] never mind that the U.S. in 1971 just did not have the wherewithal (or perhaps was simply unwilling) to pay up on its gold redemption obligations under the Bretton Woods system. Proponents of the gold standard, on the other hand, argue that gold is a nation's best defence against the mistakes of its own policy-makers. Yet others, like Robert Mundell, point to the need for a global currency as the only way to prevent excessive trade and other imbalances, yet his euro has become the very thing it was meant to overcome between smaller European states, namely a competitor with (now) major trading blocs represented by the dollar, the yen, and the yuan.

And the U.S. dollar, what some call "the best looking horse in the glue factory," may, given U.S. debt levels, be worst of all. As only the brave dare articulate, the problem isn't so much a credit crisis or a liquidity crisis. Serious as these are, both are symptoms of the larger crisis few wish to name, namely solvency. Europe and the U.S. are broke. Where this problem is concerned, monetary jiggery-pokery can do only so much and, as we have seen, may do real harm. And while few would deny deflation is the overriding danger, equally few will concede that inflationary forces, overt and covert, helped bring the world to this juncture.

Perhaps, though, Lord William Rees-Mogg offers the most cogent analysis of how inflation wreaks its worst. In a short but seminal book on the subject of the money supply and the role of gold, *The Reigning Error*, written in 1974, he strikes at the heart of today's financial challenges.

> There is no inflation that has not started with an increase in the money supply; there is no inflation which has not ended with a corruption of society, proportionate only to the degree of the inflation itself. It corrupts and weakens every social institution; it makes every member of society feel himself to be the victim of every other member of society; it sets class against class. It makes governments weak and unsure of themselves; it has in recent history destroyed more lawfully constituted governments than any other force except war itself.
>
> This is because all inflation is by its nature both inordinate and unjust; in the end it destroys wealth, but from the start it makes a great transfer of wealth, both between classes and inside classes, which does not reflect work or merit or economic contribution, but skill in speculation, luck, militancy or industrial bargaining power. It makes the whole economic system seem unjust and the whole political system seem ineffective. It makes men take short views; when money is good men plant oaks, when it is bad they can at best plant cabbages. It makes men corrupt, both by impoverishing them arbitrarily and by enriching them arbitrarily.[75]

For those of us now familiar with the workings of the financialized economies of the Western world, we understand implicitly that the picture painted by Rees-Mogg has arrived. It appears in different forms – a banking sector that in 2013 remains untamed, rampant inequality, scandal upon scandal, soaring stock markets, and so on. Wall Street may not be Weimar Germany but, looking on the excesses of the last twenty-five years, it is tempting to draw parallels. Hyperinflation may not be in sight, but the demise of the key currencies is.

Moreover, we know that, whether it is the Roman Empire or the British Empire, history teaches that collapse of the hegemon's currency means collapse of the hegemon. Or perhaps it is vice versa. In the absence of a massive game-changer, demise of the U.S. dollar could mean hegemonic change. Given the historical connections between currency collapse and geopolitical crisis, how easily that change might be achieved or whether it might happen at all is a question today's investor cannot ignore.

This is the subject of the next chapter on the ultimate economic crisis.

SIX

War: The Ultimate Economic Crisis

What does seem incontestable, however, is that in a long-drawn-out Great Power (and usually coalition) war, victory has repeatedly gone to the side with the more flourishing productive base.

–PAUL KENNEDY[1]

At times of great uncertainty, such as that created by the 2008 stock market crash, extreme reactions aren't uncommon. Like my own reaction in the grey-green room described at the beginning of this book, many are inward turning. Hopefully we emerge from that state of panic, physical revulsion, and psychological self-recrimination to take constructive action. Yet the need, in such situations, for reassurance about the existence of an ordered and coherent world, even one that is self-destructing, is sufficiently compelling that some turn to prophecy or apocalyptic, alarmist scenarios. For instance, during the week following September 11, 2001, the day hijacked airliners crashed into the World Trade Center and the Pentagon, the seventh leading search item on Google was Nostradamus,[2] a sixteenth-century alchemist and doctor still, apparently, widely consulted because of his purported powers of prophecy.

One apocalyptic scenario is vividly depicted in *The Fourth Turning*. Written in 1997, American authors William Strauss and Neil Howe explore generational themes and cycles based on a human life span they identify as eighty to ninety years. Each cycle, they argue, consists of four "turnings": the first, "The High" (i.e., post–World War II America), is a time of great optimism and economic and political birth and renewal. The second, "The Awakening" (i.e., the '60s), challenges the optimistic assumptions of The High cycle and is a time of maturation and second thoughts. The third, "The Unravelling" (i.e., the Reagan era), is a time of personal consolidation but cultural fragmentation. According to this world view, the fourth, "The Crisis," is now upon us.

"Just after the millennium," *The Fourth Turning* website tells us, "America will enter a new era that will culminate with a crisis comparable with the American Revolution, the Civil War, the Great Depression, or World War II. The survival of the nation will almost certainly be at stake."[3]

Reading *The Fourth Turning* in 1997, Doug Casey, highly respected chairman of Casey Research, author, and expert in resource stocks, was so impressed he wrote a major essay about it. In his view, history is the best indicator of what is likely to happen in the future. Certainly, to the extent we know we are going to die, we also know our future. It is the details in between that confound us. Though sparing little time for those who would predict those details, Casey nonetheless pays his respects to the three traditional ways of looking at history: the Chaotic, in which mankind is viewed as merely a victim of fate or other circumstances; the Cyclical, in which what goes around, comes around (seasons, planets); and the Linear, which does see a destination for mankind. In the Linear category, he groups the Evangelists and the Progressives. Evangelists may be religious or ideological, while Progressives believe things are getting better and that humankind will solve its problems (a category that must hold special appeal for economists and central bankers).

Casey places himself somewhere between the Cyclical and the Linear. Ten thousand years of technological progress must count for something, he argues. The future is bright and spiralling forward, but with setbacks that recur in a cyclical way. And, once every generation (defined by Strauss and Howe as eighty to one hundred years), that cycle kicks in with a cataclysmic event, usually a major war, that catalyzes a whole new epoch. Writing in 1997, Casey thought one defining event might be the crash of an airliner in Washington:

> In any event, the way the current generations line up relative to historical analogs, an excellent case can be made the U.S. is approaching another time of secular crisis, a Fourth Turning, with an expected due date of 2005 – seven years from now – plus or minus a few years in either direction. The Stamp Acts catalyzed the American Revolution, the election of Lincoln catalyzed the Civil War, the Crash of '29 catalyzed the Depression/World War II era. What might precipitate the elements now floating in solution? The answer is, practically any random event that's sufficiently traumatic. Any of the theses of current disaster/action novels and movies will do nicely. Perhaps the accidental or intentional release of a super plague vector. The crashing of an airliner into the Capitol during a joint session. An all-out assault on the IRS computers by an armed group – or perhaps the computers just melting down due to the Year 2000 Problem. Perhaps

> a financial disaster that cascades into the Greater Depression. In any of these, or a hundred other scenarios, the federal government would almost certainly act precipitously and with a heavy hand, which would bring on a whole other set of consequences.[4]

For someone who holds predictions in such low regard, Doug Casey, back in 1997, managed to make a few that were very remarkable indeed!

The prophecy industry has, if anything, gained speed. The 2012 phenomenon with its visions of cataclysm and transformation supplied particularly fertile ground. The 2012 winter solstice occurred on December 21, the same day the Mesoamerican Long Count calendar moved into its next "baktun." The entry into a new baktun was a time for celebration among the Mayans.[5] Instead of cause for celebration, however, today's New Agers saw everything from spiritual transformation and the beginning of a new era, to end-world times that could result from collision with a passing planet (see the movie *2012*), which, in addition to gouging out significant portions of the earth's surface, would create a tsunami that wipes out the rest. Needless to say, the occurrence of an earthquake off the northeast coast of Japan on March 11, 2011 – the same day unpredictable Uranus, the planet of revolutions and rebellions, entered Aries where it will remain until 2019 – added fuel to the apocalyptic fire. This planetary configuration last took place in 1926 and only ended in 1935.

Scepticism comes easily to the bruised and world-weary, no more so than to those of us licking our wounds from the 2008 crash. Where were the prophets when we needed them? Did the twenty astrologers rumoured to populate the staff of Goldman Sachs do anyone any good, other than Goldman Sachs, that is? Or are they a rumour that astrologers are promoting in their own self-interest?

No matter where we stand on the issue of prophecy, few of us, including scholars, would deny that a catastrophic world event is possible. At a time when weapons of mass destruction proliferate in the developed world, as well as in undeveloped countries, and civil strife is overtaking the Middle East and Eastern Europe, danger is ever present. Indeed, one prominent British historian and Yale University professor specializing in international relations and the correlation between economic and military power has suggested that a nuclear exchange between Iran and Israel might have been possible in 2012. Still, as Paul Michael Kennedy, CBE, FBA, "recalled," writing a fictional reminiscence from the perspective of someone living in 2031 about the "Thirty

Years' War" ignited by the events of September 11, 2001, the conflagration that destroyed Tel Aviv and killed ten million Iranians was "contained." "The Great Powers were paralysed, for what exactly was one supposed to do following an Iranian-Israeli nuclear exchange?"[6]

Fictional licence notwithstanding, this was a bold prognostication from an eminent historian whose most famous work *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000* controversially suggested, in 1987, that the end of the American Empire was nigh. At the time, such suggestions seemed far-fetched, to say the least. Back then, American prospects could not have looked better. By 1989, the Berlin Wall had fallen, the Soviet Union was crumbling, the Japanese miracle was stumbling, and Reaganomics had kick-started the economy. A continuing American ascendance seemed all but assured. But, as Paul Kennedy rightly forewarned, military spending without supportive resources also meant military "overstretch." Today, although America accounts for only 4.6 percent of the world's population and produces about 21 percent of the world's total product (about the same as the European Union but more, at the time of writing, than China, which produces about 14 percent), it is responsible for 50 percent of all global defence spending. And problems and demands continue to grow, particularly in "collapsed states and in wobbly societies (such as) the potential implosion of Mubarak's regime in Egypt,"[7] as Kennedy predicted while addressing a Canadian audience in September 2010.

With Mubarak out of office in March 2011, we can only hope that Kennedy's other predictions don't come true in any year, but we shouldn't count on it. There is nothing supernatural about any of them. Empires and dictators come and go, usually in less than happy circumstances, and, as an eminent scholar, Kennedy's study of history has facilitated his ability to detect patterns in his particular discipline. This is essentially what happened when Kondratieff lined up the price points, interest rates, and other data across many decades and many countries and identified a wave-like pattern that peaked and troughed within recurring periods of about fifty-five to sixty years. Kennedy himself provides a useful summary of the events those waves encompass when he cites historian Eric Hobsbawn's *Industry and Empire*.

> In 1850 (author's note: the Spring of the second K-wave) … Britain produced perhaps two-thirds of the world's coal, half its iron, five-sevenths of its steel, and half of its commercial cotton cloth … it could not last forever. (When) countries with bigger populations and resources

> (Germany, the U.S., Russia, Japan) organized themselves along British lines, it was natural that they would produce a larger share of world product and take a larger share of world power and thus cut Britain's share … this is a story which economic and political historians take for granted. It is about the shifts of power that occur when productive strength moves from one part of the world to another …
>
> After 1890, the United States had slowly overtaken the British Empire as the world's number one by borrowing critical technologies (the steam engine, the railway, the textile factory), and then adding on its own contributions in chemical and electrical industries, and blazing the way in automobile and aircraft and computer hardware (and) software production. It was assisted by the good fortune of its geographic distance from any other great power (as Britain was by its insularity), and by the damage done elsewhere by World Wars I and II (as Britain was by the damage done elsewhere by the Revolutionary and Napoleonic wars). By 1945 therefore, America possessed around half of the world's GNP, an amazing share, but no less than Britain's a century earlier when it held most of the world's steam engines. But it was a special historical moment in both cases. When other countries began to play catch-up, these high shares of world power would decline.[8]

Although Hobsbawn acknowledged K-wave theory, saying that "for whatever reason it works,"[9] in 1988, Paul Kennedy was quick to assure readers of *The Rise and Fall of the Great Powers* that his book does not deal with the theory that "major (or 'systemic') wars can be related to Kondratieff cycles of economic upturn and downturn."[10] But, as we consider the growing body of scholarship grounded in K-wave theory, it is difficult to see how anything in his book contradicts it either.

War and Long-Wave Theory

(In 1848 practically) every country in Europe, except England of course … had a revolution and overthrew the government, at any rate for a time. So that is something which historically is well-attested and the same thing has happened here in the Middle East.

–PAUL JOHNSON[11]

The cyclical approach to history is well entrenched, and the cyclical approach to warfare is no exception. Along with the effects of interest rates, deficit

spending, currency valuations, and a host of other economic factors, classical economists recognize the impact of war as both cause and consequence of economic developments. Nikolai Kondratieff identified economic pressures inherent in the capitalist system as the causes of wars and saw these wars as an integral part of the long wave, both as product of the wave and as impetus in its movement.[12]

> Wars and revolutions also influence the course of economic development very strongly. But wars and revolutions do not come out of a clear sky, and they are not caused by arbitrary acts of individual personalities. They originate from real, especially economic, circumstances. The assumption that wars and revolutions acting from the outside cause long waves evokes the question as to why they themselves follow each other with regularity and solely during the upswing of long waves. Much more probable is the assumption that wars originate in the acceleration of the pace and the increased tension of economic life, in the heightened economic struggle for markets and raw materials, and that social shocks happen most easily under the pressure of new economic forces.
>
> Wars and revolutions, therefore, can also be fitted into the rhythm of the long waves and do not prove to be the forces from which these movements originate, but rather to be one of their symptoms. But once they have occurred, they naturally exercise a potent influence on the pace and direction of economic dynamics.[13]

Long-wave theory distinguishes between two types of war: "trough wars" and alternating "global" and "peak wars." Trough wars occur as the economy emerges from the depths of depressionary conditions, or the "Winter" phase of the K-wave. They are usually limited and often take place in an economy in which resources are unused and unemployment is high, particularly among young adult males. At times, they are partially responsible for the beginning of a recovery. In the U.S., examples of trough wars are the War of Independence (1776 to 1783), the Mexican War (1848), the Spanish-American War (1898), and the Korean War (1950 to 1953). Each of these are separated by between fifty and sixty-five years. Analogous and sometimes interrelated wars were also taking place in Europe. By these calculations, and sixty-five years on from 1953, the year 2015 brings the global economy well into its trough war season as crises in several Arab countries, Ukraine, the Kashmir border, and, possibly, the South Pacific, ignite.

Peak and global wars occur near the top of the long wave as the climax of

an expansionary period and result from socio-economic pressures different from those of the preceding trough wars. Following a boom period, for instance, when new technologies raise the standard of living, the economy may not be able to meet ongoing expectations of improvement. When the need is for necessities, such as food, the wars that result from competition for resources and for markets become more desperate and more destructive. Looking back on Stalinism and Naziism, for instance, we recall the racial and class hatreds these systems promoted, but forget their economic (and, as we saw in the chapter on the monetary crisis, their monetary) underpinnings. As Timothy Snyder, author of *The Coming Age of Slaughter*, reminds us,

> The age of mass killing, the 1930s and 1940s, was also a moment of environmental panic. World War I had disrupted free trade, and the new Europe was divided between those who needed food and those who controlled it (so leaders such as Hitler and Stalin) were preoccupied with mastering fertile soil and the people who farmed it.
>
> World War I, in which both Hitler and Stalin played a role, had seemed to show that conquest of crop land meant security and power. It ended in 1918 during a failed German attempt to colonize Ukraine, the breadbasket of Europe. To us, the "Ukrainian breadbasket" is a strange notion – perhaps as strange as the concept of "Saudi oil fields" will be in 70 years from now. In the 1930s, however, it was at the center of strategic discussions in Moscow and Berlin. The Soviets held Ukraine and wanted to exploit its black earth; the Nazi leadership, ruling a country that was not self-sufficient in food, wanted to take it back.[14]

In the peak and global war categories are the War of 1812 (global), the American Civil War (peak), World Wars I and II (global), plus the Cold War (peak) and its tens of millions dead.[15] World War II, an obvious candidate as a "peak war," took place in a downswing. One answer comes from evolutionary economist Jan Reijnders, who points out that Germany's unemployment during the 1930s created the conditions leading to Hitler's rise (though it should be pointed out that Germany's earlier experience of hyperinflation was another factor). Like Roosevelt and his New Deal, Hitler implemented stimulus programs, only his were directed at an arms buildup. These programs mitigated the Depression, but, once under way, World War II performed a task "that would otherwise have been achieved by the depression phase of the long wave itself. Because of the enormous devastations, it pushed actual productive capacity below the level that is necessary to sustain the required rate of output.

Consequently the war fulfilled an essential precondition for the Kondratieff upswing."[16]

Regarded as absolute wars, peak wars have a major impact. Often they fall on societies already stretched, overinflated, and staring stagnation in the eye.

Whether of the peak, or trough variety, if, as German economist Gerhard Mensch writes, the "economic preconditions for war include defence contracts used as therapy for a stagnating economy,"[17] then the price paid by that economy following any subsequent war suggests the cure is often worse than the disease. Though his intentions were hardly peaceful, Hitler's arms buildup was one example of an attempt to resuscitate the German economy, and, in the short term, it succeeded. And exceptions do exist to prove the rule, though even the successful presidencies of Franklin Delano Roosevelt and Ronald Reagan, each of whom incurred massive defence expenditures that did not, in themselves, lead to war, were as much a function of their position on the K-wave as they were of personality or ideology. Franklin Delano Roosevelt, who arrived in office in March 1933, the same month Hitler came to power, and at a time of bank closures and soaring unemployment in America, jock-eyed the long wave through its depths to emerge from World War II not only on the winning side but also with the U.S. a creditor nation holding the world's reserve currency and its largest GDP. He accomplished this by avoiding entry into the war until absolutely necessary, by redirecting technologies in the automotive and electrical industries to the war effort, and by employing mass production "technics" that had "bubbled" out in the 1929 collapse but that survived in General Motors and General Electric, which went on to win the war, mature, diffuse, and become virtual utilities in the upswing following World War II.

And, most of all, the U.S. shared in the spoils of that war. As Roosevelt indicated to a British ambassador in 1944, "Persian oil … is yours. We share the oil of Iraq and Kuwait. As for Saudi Arabian oil, it's ours."[18]

Subsequent wars, however, were somewhat less "beneficial" where the U.S. was concerned. The Korean War was a trough war that took place between 1950 and 1953. It was followed by the Vietnam War. Both were proxies in the Cold War between communism and the West that finally peaked and ended in 1989 with the fall of the Berlin Wall. In 1971, the year in which President Richard Nixon removed the U.S. dollar from the gold standard, with the Vietnam War well under way, Arthur Burns, then chairman of the Federal Reserve Board, estimated that tangential military costs lifted defence spending beyond $106 billion, almost $32 billion in excess of official figures

for defence in 1971,[19] out of a total budget of $210 billion[20]– that is, half the budget. That the U.S. would, by 1975, when the Vietnam War ended, close its doors on a war economy only to succumb to the oil shocks and stagflation of the '70s suggests no end of ironies. It is hardly surprising then, that the Reagonomics "Morning in America" formula would revert to the tried and true, even without the Beirut bombings that killed over two hundred U.S. marines in 1985. After all, the multiplier effect, including job creation, from defence spending far exceeded that created by social programs. Better still, the market place was not flooded with products that might compete with other homegrown products. Instead, armaments and other defence items could be exported to the Middle East where American oil interests needed protection and Russian influence needed containment. Helping the trade balance did not hurt either.

So, with an allocation of some $1 trillion for defence spending spread through the early '80s, high-tech weaponry attracted additional capital spending, created jobs for the smokestack, rust-belt, blue-collar workers made technologically obsolete by superior Japanese and German car manufacturers, and helped turn the economy around. Moreover, though high defence spending meant high deficits, it also meant high interest rates, a high value for the dollar, and high imports, thus helping other economies.[21] Unfortunately, such measures merely bought the U.S. jobs market time. In the end, nothing could defray job losses numbering ten million factory and myriad service jobs that ultimately took place between 1973 and 2006.[22]

With one generation still smarting from memories of the unpopular Vietnam War and another still shocked by the horror of Hiroshima, the ability of Reagan and subsequent American presidencies to employ warfare as a foreign policy tool was constrained, even if finances had permitted it. Nonetheless, many see the Reagan arms build-up as a major factor in the end of the Cold War and the collapse of the Berlin Wall in 1989, even as two unpopular Bush presidencies proceeded to fight de facto resource wars to help secure oil supplies in the Middle East – a period that culminated with the overthrow of the Saddam Hussein regime in Iraq and the weakening of the Taliban in Afghanistan.

The disintegration of the U.S.S.R. and Yugoslavia brought its own set of dynamics. New political systems resulted from military clashes in the Balkans, in Tajikistan, Karabach, Pridnestrovie, and the Chechen Republic. Other changes in Georgia, Kirghizia, and Ukraine were peaceful, though few would agree that issues of leadership and democratization are settled.[23] Kiev's Maidan

offensive in 2014 and Russia's response is testament enough to the big changes these areas could yet undergo.

And now, the face of war itself was changing. If, in 1989, the war between two ideologies around the creation and distribution of wealth saw capitalism emerge the winner, in name if not in deed, history – contrary to Francis Fukuyama's famous declaration – was nowhere near ended. Barely had the last stone of the fallen Berlin Wall touched earth when a new battle erupted. Movements that arose in the 1970s from a sense of oppression, utopianism, nationalism, and the struggle for ethnic liberation – the Irish Republican Army, Bader Mein hof, the Red Brigade, and Black Panthers – provided the template for the new face of war: this time state-sponsored terrorism.[24] In October 2001, the War against Terror was officially launched when American, British, and Afghan Northern Alliance armed forces commenced the War in Afghanistan against Al Qaeda in response to the September 11, 2001, attacks.

Some Trough Wars

Facebook should get a Nobel Prize as an agent of change.

–JOHN BUDDEN[25]

The declaration of the War on Terror in 2001, coinciding with the bursting of the dot-com bubble, brought on the Winter of the fourth K-wave. Some ten years later, it has proved itself a harbinger of the many trough wars to come, reaching their ultimate expression in the Middle East. The year 2011 marked the fifty-eighth year since the Korean War, a trough war that took place at the bottom of the third K-wave. But, as historian Paul Johnson indicated in a *Wall Street Journal* interview, the unrest in the Middle East, which started in Tunisia and spread to Egypt, Libya, and other Middle Eastern countries in early 2011, is analogous to that of 1848, when revolutionary movements took place in France, Germany, Austria, and Romania. The unification of Italy (1859 to 1879) and Germany (1862 to 1870) followed in the expansionary upswing, as did the American Civil War.

The year 1848 was also the year in which the second K-wave troughed. Crop failures mobilized the peasantry against the nobility while the Industrial Revolution mobilized the working classes. It was also the year *The Communist Manifesto* was published. Similarly, in 2011, information technology and social media mobilized Middle Eastern middle classes against their despotic leaders. And, like 1848, inflated food prices mobilized that area's peasantry still emerging from an ancient culture. As Paul Johnson observed, the parallels

between the Middle East and 1848 Europe could not be more striking (though the Korean War, a war that took place in the trough of the third K-wave, also saw an ancient culture bumping up against modernity). With its volatile mix of extreme reactions, contagion, and the possibility of Iranian weapons of mass destruction, the Middle East could well produce a contained nuclear exchange of the type described by another British historian, Paul Kennedy. Indeed, the September 2010 issue of *The Atlantic* thought such a conflagration could take place by July 2011.[26] By September 2012, the Prime Minister of Israel, Benjamin Netanyahu, was demanding a "red line" to stop Iran's nuclear program.

Why Peak Wars Cluster in the K-wave's Centre

I have a hunch about why wars tend to cluster around the centers of the K-waves … nations grow at different speeds so that after 30 years the cards are mixed … In my cynical pub theory of history, this tempts the newly stronger nation to punch the newly weaker one … Being Number One fills the nations' hearts with pride, but is extremely expensive, so Number One tends to go bankrupt.

–CESARE MARCHETTI[27]

If Nikolai Kondratieff had located various kinds of warfare on the long wave and his early adherents had assigned them "peak," "global," or "trough" war status, what conclusions are today's K-wave theorists reaching about current and future wars? For the necessary overview and context, we once again turn to Brian J. L. Berry, who devoted twenty years to studying K-wave theory using American data.

In his 1991 opus *Long-Wave Rhythms in Economic Development and Political Behaviour*, Berry cites American political scientist Quincy Wright's 1941 *A Study of War*, which identified great power wars in the periods 1701 to 1714, 1756 to 1763, 1795 to 1815, 1853 to 1856, and 1914 to 1918, a theme taken up by another American political scientist, George Modelski. Modelski's theory of long cycles of world leadership cites intense periods of warfare every *other* fifty-five-year period, creating a one hundred and fifteen-year cycle in all. "According to historian Arnold J. Toynbee, this cycle of war, spanning two Kondratiev waves, has been repeated five times since 1494 …"[28] Modelski shows how the double-Kondratieff patterns result from the rise and decline of "world leaders" – those nations with the capability not only to win wars but also to maintain the international order thereafter. These "system leaders"

rise and fall within a given hundred-year period of fighting and winning a global war: the Portuguese from 1491; the Dutch from 1580; the British from 1688; the British again from 1792; and the U.S. from 1914. Following this continuum, the next system leader will be determined in a "global" war that will take place approximately one hundred and fifteen years from 1914, say 2030. Victory in war is followed by a period of world power, after which contenders appear creating periods of "delegitimization" and "imperial overstretch" as the dominant power's commitments can no longer be supported by its economy. Reaction against the great power develops followed by "deconcentration" during which "multipolarity" degenerates into rivalries and another global war. In the world leadership cycle comprising two K-waves, two wars may thus appear. The first peak sees a "global" war while the peak of the second wave sees a "peak" war. For instance, in the 1914 American cycle, World War I comprised the global war while the Cold War was a peak war. "Growth," says Goldstein, "creates the economic surplus required to sustain major wars among core powers. But these large-scale wars drain surplus and disrupt long-term economic growth."[29]

Notably, the British remained the ascendant world power through two cycles, that is, two double-Kondratieffs.

Are wars the result of internal dynamics or external causes? Kondratieff believed they were part of the long-wave internal dynamic, which, later studies showed, was certainly the case in Britain and the U.S. where raw material and resource shortages resulted in price upswings and subsequent wars. Conversely, major powers don't fight major wars after a depression. Only during the upswing can they afford to build the war chests needed to train and equip their forces.

Berry has his own theories about the war-production cycle that relate to the work of economist and Nobel Laureate Simon Kuznets. Kuznets built on the work of Kondratieff"s American contemporary, Wesley Mitchell, and identified the business cycle now known as the Kuznets Cycle. Berry summarizes the work of others as follows:

- Global warfare breaks out during the speculative growth phase of the inflationary Kuznets cycle when scarce resources are in demand.
- A system leader is established in one K-wave (a "global" war) who is then challenged in the following K-wave (a "peak" war).
- Each hegemon has translated technological advances in one K-wave into superior economic growth and power in the next. A successful

challenger to that power is one that has developed the most technical progress during the hegemon's period of dominance.

- The controlling factors appear to be fighting over resources during the speculatory upswing, along with periods of growth which allow competitors to emerge. Thus the world-leadership cycle must last for two K-waves. "The British experience suggests that a hegemon that remains innovative should be able to maintain its world-leadership position for a longer span of time; the critical variable is the rate of technical progress and its translation into superior economic power."[30]

By 2006, the growing body of K-wave scholarship on war cyclicality had found its way to a NATO-sponsored conference. Since the last quarter century, writes T. C. Devezas, editor of a collection of papers presented at that conference, "two main trends in analyzing warfare are now acknowledged: the increasing recognition of the existence of some cyclical patterns of warfare involving the core of the world system, and a shift towards newly evolving patterns involving non-state actors and asymmetric warfare." And despite the prevailing view that war is a random event,

> Long-wave theorists have shown a clear secular pattern of recurrence of major wars within a period of 50 to 60 years as well as a concentration of wars in the upswing phase of the K-wave … Moreover, simple extrapolation of the secular trend points to a highly probable severe conflict (in the upswing of the next K-wave), involving countries struggling for leadership in the Pacific Rim. Hence … wars are not merely the result of blind social and political forces, but patterned according to long socio-economic cycles and/or, as recently proposed, the result of deep and general laws underlying the coevolutionary unfolding of the world system.[31]

And how are these patterns now presenting themselves?

Nothing Is Forbidden

(The Nixon administration) understood the evolving conflict between China and the Soviet Union and attempted to achieve a balanced relationship … the unusual aspect of the current situation is that every major country is in deep trouble including China. No major country is in a position to launch a significant war because it is too preoccupied with its own difficulties and challenges of others to develop a coherent approach.

–HENRY KISSINGER[32]

It is a truism to say that globalization has created a new world in which there are glaring contradictions. The integrating forces of new technologies, particularly in communications, combined with expanded international trade, contrast starkly with the fact that some two billion people, many in African and Muslim countries, have failed to participate. Processes of homogenization and diversification, too, are contradictory as are those between regionalism and globalization.[33] But if this divide has failed to impede the development of a "world consciousness," the spectre of a clash of civilizations could. Samuel Huntington, when he coined the term, saw this conflagration resulting from Muslim aggression, but, increasingly, others see the rise of Chinese communism presenting similar threats.

Until recently, few, however, were talking about what security experts see as the predominant and growing security threat in our time of globalization. The expanding numbers and sophistication of private armies, bandits, outlaws, terrorists, insurgents, warlords, drug cartels, international crime syndicates, and human smuggling rings are challenging security forces often locked in outdated operational modalities – militarily, as well as in policing and intelligence.

In the meantime, the criminals get down and dirty. "In this connection," says Max G. Manwaring of the U.S. Army War College, "there is only one governing rule for contemporary conflict – there are no rules; nothing is forbidden. This is warfare in the age of globalization. Though less bloody, it is no less brutal."[34] Since Manwaring made that statement, on-camera beheadings become part of the aggressor's arsenal, as has traditional warfare, in the Middle East, and so the brutality intensifies. But even the least brutal of their methods may mean nothing less than an attack on the existence of the nation state in which the goal is not territorial dominance but religious dominance. Many security agents argue that, whether through bribery and corruption at the highest levels of government, or through invading and co-opting the institutions of Western governments – for which the forces of political correctness, human rights tribunals, "lawfare" (libel suits), affirmative action programs, and "weapons of mass disruption" become weapons for exploitation – the stakes are just the same as all-out war. Moreover, it is anticipated that organizations such as Al Qaeda will soon have directed energy weapons. "These findings, along with the emergence of wars increasingly fought over social and political organization rather than sovereignty, have implications for both counter-asymmetric warfare and Kondratieff Waves research," concludes Dr. Robert J. Bunker of the Aerospace Corporation in California.[35]

Not to be overlooked is how the free market economy is facilitating resource wars by other means, much in the way many tenets of Western liberal democracy have become the Trojan horse facilitating the subterfuge of its institutions. As Vladimir Lenin purportedly observed in 1922, "the capitalists will sell us the rope with which we will hang them,"[36] and the rope may well be liberal democracy itself. While once these wars were fought in trenches or through military manoeuvres that colonized whole countries in order to commandeer their raw materials, today corporate takeovers, state-owned enterprises and mass migration do the same job with little if any fuss. Where the takeover originates with a company from a country with compatible political and legal institutions, the arrangement may or may not be mutually beneficial. Where no compatibility exists, major questions arise. Countries like China clearly fit in this category. Their resource needs are legion and often they import their own labour to effect the resource extraction.

Other experts believe that, by 2020, nuclear conflict will be well on its way. Already Japan, South Korea, and Germany, along with Iran, Egypt, and North Korea, have their own nuclear programs.[37] And if one of the fundamental causes of war is the struggle for resources, one of the countries most vulnerable to asymmetrical warfare could be Russia.

Russia has oil, gas, and mineral deposits needed by the European, Islamic, Chinese, and even American civilizations. Russia possesses two thirds of the world's apatite (phosphorous, fertilizer) resources, more than 40 percent of its prospective gas reserves, about 40 percent and more of its platinum, 20 percent of its coal and cobalt, and 13 percent of its oil. These commodities, particularly the gas, sustained Russia's enfeebled economy through the 1990s and now form the basis of its world energy superpower status. Wood resources, seafoods, and drinking water add to its cornucopia of resource goodies. With Russia at the crossroads of the first three civilizations, Russian K-wave economists worry that asymmetric conflict, aimed at control of Russian resource potential, is all too feasible. The U.S. is viewed as one of those threats.

External threats like these are made even more problematic by Russia's internal problems. Its struggling market economy was a casualty of the fourth K-wave's peak war, the Cold War,[38] and the dissolution of the Soviet Union. In the ten years after the fall of the Berlin Wall, its GDP dropped by 44.2 percent, production fell by 54.2 percent, agricultural production by 46.1 percent, and investment in fixed capital by 79.1 percent – losses comparable with those Russia sustained during World War I and the Russian Revolution. Thanks to ownership of the world's largest natural gas reserves and its 80

percent state-owned Gazprom, also the largest in the world, Russia's economy was restored by the late 1990s, though showing little growth[39] or any signs of the innovation economy necessary to ignite an upswing. This changed in 2000 when Vladimir Putin became president and several large vertically integrated oil companies came on stream. With a 7 percent annual growth rate predicated largely on 50 percent of the state budget being met by oil and gas revenues – 50 percent of which, in turn, arrived from exports to the European market,[40] Russia's resurgent middle class has attracted the world's major automakers, including General Motors, which is investing $1 billion to ramp up output. Similarly, Volkswagen sees 3,032 percent sales growth ahead.[41] With a debt to GDP ratio of 8 percent, a large trade surplus, a capital city with more billionaires than any other city in the world (not to mention a state of the art underground transit system), significant military strength and a growing supply of gold – some 570 metric tons[42] – and you have to wonder why systemic corruption persists. Yet bribes accounted for 20 percent of the country's GDP as of 2005,[43] prompting Transparency International, in 2010, to name Russia the worst of the major economies.[44] Signs of a Russian Spring, however, emerged during the 2012 re-election of Putin to the presidency when protestors objected to the rigged electioneering. While this may eventually prove a healthy antidote to years of autocratic rule by czar and president alike, social policies that differentiate incomes and living standards, as well as a multiethnic society that attracts radical elements including a Muslim population that some estimate could grow to 20 percent of the total by 2030, threaten instability and the possibility of social unrest and uprisings. Russia thus remains both a source and potential location of asymmetrical warfare. Added to this, demographics reveal that Russian fertility and longevity rates are among the lowest in the world.[45] These, along with growing global supplies of oil and gas from shale deposits that threaten to undercut its economic base, suggest a Russia so strategically weakened is at risk of becoming a battlefield as civilizations compete for its resource heritage regardless of what a resurgent middle class or its nascent Russian Spring may accomplish.

Trend Watching

A strong person, … can carry an impressively heavy backpack uphill for a long while. But if that person is losing strength (economic problems), … and the terrain becomes more difficult (rise of new Great Powers, international terrorism, failed states), ... (then) that is precisely when nimbler, less heavily burdened walkers get closer, draw abreast, and perhaps move ahead.

–PAUL KENNEDY[46]

Following its decisive victory in the Cold War, the future of the U.S. as a global superpower is itself now in question. Unimaginable debt levels (the Debt Crisis) being financed by the printing of money (The Monetary Crisis) and productive capacity (The Production Crisis) achieved at the price of higher rates of unemployment suggest the U.S. cannot much longer retain its dominance economically or militarily. An economic rival, enjoying an innovative economy with high growth, will inevitably compete with the U.S., not only for resources but also for military and political dominance. Among the growing numbers of "declinists," University of Wisconsin history professor Alfred W. McCoy says that, by 2025, "it could be all over except for the shouting."[47] He notes that, according to a 2008 report *Global Trends 2025* from the U.S. National Intelligence Council, the U.S. will find itself behind China in economic output by 2026 and behind India by 2050.

For the declinists, the question isn't if or when, but how bad the decline will be when it arrives. Will it be mere economic decline, with its shrinking share of world trade, the decline of technological innovation, and the end of the dollar as a reserve currency? If so, the costs of imports will soar, defence spending will have to be slashed, and the U.S. financial-military world order will be bankrupted. As other powers clash to replace it, the U.S. may attempt its Hail Mary pass. According to McCoy, this might consist of

> a lethal triple canopy of advanced aerospace robotics that represents Washington's last best hope of retaining global power despite its waning economic influence. By (2020), however, China's global network of communications satellites, backed by the world's most powerful supercomputers, will also be fully operational, providing Beijing with an independent platform for the weaponization of space and a powerful communications system for missile or cyber-strikes into every quadrant of the globe.[48]

In the U.S., rising prices and rising unemployment could ignite divisive debates and violent clashes, paving the way for a far-right presidency that could threaten military retaliation or economic reprisal even as China looms as the world's number-one energy consumer with India not far behind. By 2025, with Russia and Iran controlling half the world's gas supplies, a shale gale that fizzled, and the U.S. no longer able to afford a military presence in the Gulf, another oil shock could render the country functionally bankrupt. And, as in 1956, the year that marked the end of the British Empire, military misadventure in the Persian Gulf or even the banal but symbolic purchase of GM by the Chinese could result in "America's Suez."

And that battle for the Pacific Rim? With huge profits from its export trade with the U.S., China has the resources to challenge U.S. dominance of the South China Sea where, according to Michael Klare's *Resource Wars*, "undersea resources are subject to overlapping and contested claims, and the states involved in these maritime disputes appear prepared to employ military force in the defence of what they view as vital national interests."[49] Following U.S. naval exercises in the area in 2010, Beijing's *Global Times* retorted: "The U.S.-China wrestling match over the South China Sea issue has raised the stakes in deciding who the real future ruler of the planet will be."[50] But the World War III scenario projected for the period around 2030 will be like nothing we currently imagine. With weaponry straight out of Star Wars, drones, robotics, and "fractionated, free-flying satellite" systems and viruses paralyzing the supercomputers that program the world's military operations, the planet may yet see an "immaculate" world war executed with plenty of disruption but without loss of human life.

But while the rise of a new global superpower is possible, it is hardly probable in the foreseeable future. Riddled with corruption, democratically (and, in Russia, economically) challenged, and absent the rule of law, neither China nor Russia has the institutional coherence to assume such a role, though no one should count either out in the long run. Indeed, both are today playing "foot-in-the-door" geopolitics, or, as Dean LeBaron and John Budden frequently observe, they are playing chess while the rest of the world is playing checkers. At least one world view – that promoted by Aleksandr Dugin, a Russian publisher, founder of the National Bolshevik Party in 1993, author of *Foundations of Geopolitics* in 1997, and an advisor on geopolitics to the chairman of the Russian State Duma – sees Russia at the centre of a Eurasian Empire that extends "from Dublin to Vladivostok" and enlists Japan and Iran as allies. This "ideological foundation for post-Soviet imperialism,"

as one observer described it in 1994,[51] has since been adopted by President Putin who is actively pursuing the creation of the Eurasian Union, replete with a customs union that encompasses many of the former Soviet bloc states, by 2015. At the same time, he is co-operating with Iran and China in the use of currencies other than the U.S. dollar for trading purposes and with Israel by co-operating on developing its enormous offshore shale gas reserves in the Mediterranean. While Putin is talking economics, Dugin is talking politics, and he sees the Atlanticist powers as the enemy. Putin's annexation of Crimea and destabilization of Ukraine more than suggest Dugin's vision is in play, yet should it ever come to pass, its greater adversary, as Nixon and Kissinger realized, is more likely to be China, for which Siberia is the answer to its resource needs. Having concluded a deal with the deposed Ukraine President Viktor Yanukovych to farm Ukraine's fertile farmlands, it is clear China also has eyes on resources in the area, generally. For now, Russia and China may co-operate, but, as Nixon and Kissinger concluded, conflict between them is equally likely.

Other dystopic visions of the future foresee global rule by coalitions of "transnational corporations, multilateral forces like NATO, or an international financial elite"[52] that could supersede nation states and empires entirely. In this scenario, people would be relegated to urban and rural wastelands, which would become their own distinctive battle spaces. The movies *Blade Runner* and *Road Warrior* come to mind. Alternatively, we could see a period of regional hegemonies. Samuel Huntington's global reordering fits this bill in which a fully integrated Western Region abuts an Orthodox Region and with it the Sinic, Islamic, Buddhist, African, and other such regions.

Others see a happier future. In an article written in 2012 for *The New Republic* and embraced by President Barack Obama, Robert Kagan predicted U.S. production at roughly the same place it was in 1969 – a quarter of global economic output. Not only that, but, in this scenario, Americans would remain the richest on the planet. Asian economies have risen at the expense of Japan and Europe, not the U.S., he wrote.[53] Similarly, long-cycle specialist George Modelski believes that, even though global leadership is moving into its lame duck season, it will ultimately evolve in the direction of planetary-level organization. The question is how the key global players will line up for selection of the next system leader. The overall tendency will be towards "deconcentration," he says, politically and economically, with coalition-building increasing among the democracies. The creation of a "Community of Democracies," initiated in 2000 by the one hundred and seven ministers who drew up the Warsaw Declaration, was stalled when key nations could not agree on the Iraq

War, though some still believe it could compete with the United Nations. In any case, since the Soviet Union collapsed, the main alternative vision has been Jacques Chirac's "multipolarity," a condition Modelski sees as a product of "deconcentration." With the U.S. still the unipolar leader in military terms, the rise of China and India makes multipolarity more likely. More to the point, today's democracies (including India if not China), comprise over half the world's population, which puts them in a majority position, making war less likely. Yet, given that global democratization could take until 2050 and that risks exist in the structural weaknesses of global institutions like the United Nations, large-scale warfare around 2030 is still possible. Modelski, writing before the Arab Spring, pointed out that, in the upswing of the fifth K-wave that follows the current K-wave trough/winter, information technology will achieve global penetration (its diffusion and market saturation phase), thus laying the groundwork for worldwide democracy and co-operation. "The United States' status as lead economy in the Information Revolution, as well as their position as an open democratic society, are at this time two of the factors making probable American re-selection to a second term of global leadership in an evolving global democratic polity,"[54] he concludes.

This is a view partially shared by a collection of retired senior military officers who are the authors of the website Fabius Maximus. They write that the political and economic orders that defined the post–World War II era have "burnt out." The collapse of Soviet communism will be followed by a collapse of liberal democracy, now no longer sustainable because of excess debt and an aging population. The new, likely multipolar, global order, will emerge with the U.S., China, the European Union (in some form), and Russia (the major petro-state) sharing the stage. Once both liberal and communist systems end, out-of-favour, forgotten systems may reappear. "More important," the Fabius Maximus group writes, "are the great intangibles: the quality of each nation's leadership, and the degree of their social cohesion."[55]

Just how reliable are predictions like these? Just how far can we take the K-wave theory of global warfare?

The final pages of this chapter concluding parts 1 and 2, about the first Kondratieff Winter of the twenty-first century, seemed to me a good place to revisit questions about cyclicality and to place them in a perspective meaningful to investors.

"Human beings seem to abhor a conceptual vacuum," Gerald Silverberg of Maastricht University told his K-wave colleagues during their NATO-sponsored conference in 2006. "They seem to be programmed by evolution

to detect order in seeming chaos and recognize important configurations … with uncanny accuracy. For indeed, the ability to explore genuine order in the environment (the regularity of the seasons, the habits of prey) should impart a selective advantage to those who can properly conceptualize it."[56] And, like Doug Casey, he cites the three primordial patterns that have historically dominated human thought: stasis or apotheosis (Final Judgement, Fukuyama's End of History); cyclical (the seasons, planetary movements); and Heracleitan (no pattern, God throws the dice). Silverberg then makes the argument that the long wave is situated between the second and third possibilities and that it "while not being cyclical, has a distinctive pattern, and while showing elements of persistence, is not very predictable."[57] Acceptance of patterns, nonetheless, is important. It may not allow for precision forecasting, but a pattern that is persistent allows us to prepare for its eventuality. Thus even though no seven-year pattern of famine and plenty has ever been established, we may nonetheless stockpile grain in times of plenty in preparation for times of famine. Patterns also allow for the construction of models, enabling identification of underlying mechanisms. Newton's celestial mechanics drew on Kepler's laws, for instance. Even so, Silverberg cautions, "purported patterns" must be subjected to sound methodologies to prove they exist and "are not figments of our order-loving fantasy."[58]

I found Silverberg's approach to long-wave theory (essentially an elaboration of Dean LeBaron's observation that the K-wave is an imprecise tool) very persuasive. The point is not to try to identify precise dates, but to see the trend and where it is likely to go. So while establishment economists remain skeptical (Professor Berry suggests long wave rhythms are ignored because they are exogenous to available policy instruments),[59] the growing body of K-wave scholarship meets important tests of rigour and methodology even though it may take another cycle before it is assimilated into mainstream economic thinking.

Are we at the mercy, then, of cyclical economic patterns over which we ultimately have little control? Is it all determinism? K-wave experts in future studies argue that we are still in a transition from an Industrial Society and dealing with its inherent risks (of which the 2008 downturn is one obvious example). The richer we get, they say, the more we try to avoid risk and the more deeply influenced we are by fear of new threats presented by global terrorism, pandemics, and climate change.[60] Yet by combining future studies with evolutionary theory (which posits that system stability depends on the ability to tolerate complexity), and chaos theory (which maintains there is a

subtle order in which bifurcation allows for "jumps" to different evolutionary states) with K-wave theory, we may not only mitigate risk but also surf the wave to bigger and better things. "If we accept that the cycle is the same regardless of geographical, economical or social conditions, then there must be something else … the clue lies in the generational and cognitive, or more precisely, learning capacities of any given system or organization … Only a community that has the physical and intellectual capacity will be able to ride the KW."[61]

For investors, the K-wave is an awfully long time. As Doug Casey observes, right or wrong, for the investor the short term is more important than the long term. And while the long term may work for Warren Buffett, it was Keynes who pointed out that, in the long term, we are all dead. "History shows that goes for civilizations as well as people," Casey concludes. "The problem is that our civilization is now on the cusp of the long term."[62]

From the vantage points of the yellow brick road, the rabbit hole, and various burial sites, the global situation appeared more daunting, and my investing skills less equal to the task than ever. Understanding it was one thing, but what to do about it was something else entirely. Yet, as John Budden prompted, when you are ten miles up … what do you see? The questions at least were clear. Which parts of the world were best positioned to ride the K-wave? Which asset classes would flourish? Which would crash? History provided some important clues, but now it was time to recap and enlist the help of some Kondratieff-savvy investment minds for some concrete advice.

PART 3

Investing During the Kondratieff Winter

SEVEN

A World of Trouble

The wheels came off the cart in Ireland, but the biggest cart is the U.S. and it's only a matter of time.

–JOHN BUDDEN[1]

By November 2011, the curtain on Act II of the first Kondratieff Winter of the twenty-first century had long been raised. Earlier in the year, in March, the world held its breath as an earthquake, followed by a tsunami, placed a question mark on Japanese capacity and put the future of nuclear energy under watch. Fortunately, the Japanese people, with their legendary gift of social cohesion, rallied and stabilized their economy. Meanwhile, those who knew their history waited trepidatiously for the next shoe to drop. If the dot-com crash was the fourth K-wave's equivalent of the 1929 crash, was Lehman its equivalent of the Credit-Anstalt moment – the moment when, in 1931, the failure of a major European bank kick-started the second leg of the Great Depression? Certainly there were plenty of European banks ready if not willing to assume the role of another Credit-Anstalt, and, like the period following the 1929 stock market crash, 2009 and 2010 saw a great bounce in the markets extending into August 2011. Even in the best of times, a healthy correction would have been in order, but these were not the best of times. By October 2011, the Dow lost 1,000 points. Though it would surpass its 2007 highs in early 2013, a bounce off the October correction of 500 points seemed unconvincing, at least until it reached even higher highs into 2014 when everyone really started wondering just how high the markets would go.

But in 2011, Europe was seizing up as first Greece, then Italy, hovered on the edge of default. Like Ireland before them, the bond vigilantes had driven bond yields beyond 7 percent – the point at which debt repayment costs wipe out any hope of GDP gains and so guarantee a downward-spiralling economy. Only the desperate, the brave, or the foolhardy risked buying this

kind of "paper," as those in the trade called these securities. After all, high-risk bond-issuing countries could, at any point, be subject to a "haircut," that is, the debtor country would pay only a fraction of its worth on maturity, or it would default on its payment entirely. Also, as had happened in Ireland, regime change was under way as the thoughtful President of Greece, George Papandreou, and reprobate Italian prime minister, Silvio Berlusconi, took their exits. The dour economist and specialist in credit crises, Nouriel Roubini, who since the beginning of the 2008 crisis had distinguished himself by his superior analysis, openly discussed the eurozone endgame. "With Italy too big to fail, too big to save," he wrote, "sequential, coercive restructurings of debt will come first, and then exits from the monetary union that will eventually lead to the eurozone's disintegration."[2]

The chickens of deficit financing, the twenty-first century version, had come home to roost, just as they had in Europe in the aftermath of World War I. Portugal, Ireland, Italy, Greece, Spain, and Cyprus, according to Roubini, had lost competitiveness to emerging markets because of a strong euro and weak productivity, producing large current account deficits. Unsustainable liabilities had resulted from public debt (entitlement spending in Greece, Cyprus, and Portugal) or private sector debt (housing boom and bust in Ireland and Spain). Despite high public debt ratios, Italy had been spared because of a high savings rate in the household sector. Now this, too, was disappearing.[3] By 2013, it was apparent that even France would not be immune. The world's highest rates of taxation and welfare payments combined with falling industrial output meant France's debt growth was unsustainable, John Mauldin, master debt chronicler and investment guru, concluded in August – a month when, in eloquent testimony to the entitlement society, the whole of France was on holiday for the whole month. Little wonder, Mauldin indicated, that it was on its way to becoming the next Greece.[4] In any case, *Der Spiegel* had already declared "run for your lives" the new motto in Europe. Capital flight, that is, people emptying and closing bank accounts in Greece and Italy totalled fifty and eighty billion euros respectively in November 2011.[5] With Swiss banks the new safe haven, the Swiss franc was forced so high it had to peg itself to the euro while London real estate prices once again took off.

The global picture was hardly better.

By 2015, half of total outstanding debt in the world's top ten debtor nations would come due – $15 trillion.[6] How would this be financed and at what rates?

Solving sovereign debt problems was paramount, but few could agree about the means for achieving this. As J. Anthony Boeckh explained in his

November 2011 newsletter, "The problem of excessive debt can only be addressed through some combination of growth, inflation or default. Inflation and default are only useful insofar as they clear the way for growth in the medium term. A lack of growth makes deflation and/or default all the more likely."[7]

The Wheels on the Cart

Greece is again on the cusp of default and I predict another bailout because Germany makes out like a bandit (with its exports) when the euro is weak.

–JOHN BUDDEN[8]

Unlike the U.S., where the Federal Reserve was able to step in as "lender of last resort" when its banks were crushed by defaulting subprime mortgages, Europe had no lender of last resort to backstop banks exposed to the debt of bankrupt countries. Talk of pulling out the "big bazooka," a fund in the order of two to three trillion euros, was everywhere, but economic and political constraints made "bazookanomics," as Terence Corcoran, the unforgiving editor of Canada's *Financial Post* dubbed it,[9] virtually impossible. The Emergency Financial Stability Fund, set up for this purpose, had not been able to attract the necessary lenders, while as a monetary but not a fiscal union, the eurozone would have to renegotiate important treaties in order to give its European Central Bank a mandate to print the necessary euros and, indeed, even to bail out countries. But new treaties would require years of negotiation with no guarantee increasingly nationalist populations would ratify them. In any case, the productive northern members of the eurozone, led by Germany, balked at the idea of bailing out their profligate peripheral neighbours even if they could tolerate the spectre of the kind of hyperinflation so much euro printing might bring and despite the problems concerning solvency and liquidity to which many of them had been exposed by the banking and government sectors of the PIIGS nations. Worse, European banks provided more than 50 percent of international bank lending and just under 45 percent in Asia. Should one fail, "contagion," another euphemism for potentially fatal interdependencies among these banks, was therefore a major risk. Market volatility and declining industrial activity would almost certainly result if global liquidity shrank.[10] The one remedy that might have helped, namely for the bankrupt countries to leave the monetary union and adopt their previous currencies with a view to devaluing them, presented its own risks, among them the end of the EU.

Again, Boeckh wrote:

> Policy discussion in Europe is focused on stopping contagion and ending the financial crisis, with solutions based on a pervasive bias towards austerity. (But while) Spain is being congratulated by its northern peers for taking drastic action on its budget gap, nearly 1/4 of the population is unemployed and rising fast … The key logical inconsistency of this approach is the belief that austerity and growth can occur simultaneously. Absent the relief valve of a soft currency (e.g., Iceland and Argentina's devaluations and sharp recovery), deep austerity will result in misery, depression and deeper insolvency, eventually even for Germany, whose strength has come in good part, from a cheap currency and a growing current account surplus while other eurozone members have off-setting deficits.[11]

On November 23, 2011, the failure of a German bund auction, followed by rising German bond yields, prompted *The Telegraph*'s Jeremy Warner to declare a defining moment. "The crisis is no longer confined to the sinners of the south. Suddenly, no-one wants to hold euro denominated assets of any variety, and that includes what had previously been thought the eurozone safe haven of German bunds."[12] The euro was in its death throes, he concluded. It was no longer a serious currency.

The Dreaded "D" Word

More quantitative easing will produce growth at a diminishing pace, but sooner or later governments will be pushing on a string.

–JOHN BUDDEN[13]

Given problems in the eurozone, a third round of monetary stimulus for the U.S. in the form of QE III seemed a near certainty though, curiously, a pall had also settled. As the EU crisis unfolded, the U.S. nervously congratulated itself for having survived its Lehman moment in 2008 and admonished the EU for its failure to do the same in comparable circumstances in 2011. The worst of the U.S. crisis seemed to be over, at least until after the 2012 election even though neither employment, GDP, industrial production, nor real incomes had managed to get back to their highs of late 2007.[14] The latke-loving David Rosenberg, who endeared himself to readers everywhere with his "Breakfast with Dave" musings as chief economist of the Toronto asset management firm Gluskin Sheff, allowed as to how, though there was no official definition of a depression, we were enduring one now, probably not dissimilar to

the post-bubble Japanese experience of the last two decades. "An economic depression," he proffered, "occurs only once it becomes painfully obvious that the markets and the economy are failing to respond to repeated bouts of policy stimulus."[15] Still, few were using the dreaded "d" word, deferring instead to the sanitized, more palatable term "Great Recession," though James Rickards, in his newly released best-seller *Currency Wars*, pointed to the shame of forty-four million Americans on food stamps[16] and the ubiquitous economist Paul Krugman, no slouch when it came to using the "d" word himself, described food stamps as today's equivalent of soup kitchens.[17] Later, in 2013, Rickards would describe a depression as follows:

> The reason economists don't like to talk about depression is because it's not mathematically defined. A recession has a mathematical definition. It's two consecutive quarters of declining GDP with rising unemployment. A depression is a little more amorphous. And it doesn't mean the economy is declining all the time. You can have growth in a depression. What makes a depression different is you may get growth but you don't get trend growth, you get a sustained long period of below trend growth. That's how Keynes defined it and I think that's the right definition. For example take the Great Depression from 1929 to 1940. You actually had pretty good growth in 1933, 1934, 1935 then we went back down into a severe recession in 1936–37 within the depression. So they never got back to trend. Unemployment never came down to where they wanted it. So that's what a depression is. Just a long grind. Japan's been in one and the United States is in one now.[18]

Rickards, explaining in his book *Currency Wars* how the world had been brought to this state of affairs, pointed to the widespread misuse of economics whether by the U.S. Federal Reserve system or of the Keynesian, Monetarist, or Financial varieties. Rickards argued that central banks can solve liquidity but not solvency crises, and even on the liquidity front, they got it wrong. From 1929 to 1933 they did not supply enough liquidity, while in 2007 and 2009, closing banks was the answer, not liquefying them. Never mind failures in its mandates relating to price stability, regulatory control, and full employment. Instead of being the tough lender of last resort exacting strict terms that Walter Bagehot demanded as a necessary precondition of lending in such circumstances, the Fed was merely saving banks from themselves with bailouts that allowed bondholders and bank management to collect interest, profits, and bonuses at taxpayer expense.

To be fair, it seemed to me that Chairman Ben Bernanke readily admitted the limitations of the Federal Reserve. What he did not do was point to the limitations of long-held economic orthodoxies that, now, simply weren't working. The emperor had no clothes, Rickards was saying, and it was hard to disagree. Early glimpses of naked flesh appeared in Monetarist policies now working their way into all global systems. Premised on the Quantity Theory of Money (money supply multiplied by its velocity equals the price level multiplied by real GDP, or MV=Py), Milton Friedman, the 1976 Nobellist in economics, showed how increasing the money supply to increase GDP would work only to a certain point. Anything else would be inflationary, albeit after some time had passed by, and would cancel out the gains. But now it was increasingly clear that, while the Fed could control the money supply by printing money to purchase government bonds, it could not control velocity, that is, the rate at which people and corporations borrowed or spent money. Moreover, its attempts to control this aspect of the equation required manipulation and deception. Asset inflation would be the first such manipulation. Housing prices in the U.S. and some parts of Europe were a washout, but stock prices weren't, so these were the obvious target. Accordingly, on cue, these soared whenever a new round of quantitative ("quantity" of money!) easing took place. Negative interest rates helped the process along. The other manipulation was to create a fear of inflation, Rickards argued. Confident they could control inflation by simply raising interest rates, central bankers nonetheless hoped that fear of rising prices would compel people to spend more sooner. In this respect, no central banker had to utter a word, since pundits and critics of "inflationary" central bank policies were happy to oblige. And, for all we investors knew, they could be right, given how much money was being printed and the fact that Milton Friedman's inflationary-lag effect could kick in.

Keynesianism, Rickards continued, was also indiscreetly revealing flesh. The theory that a "multiplier" economic effect comes into play whenever government spends money, spurring "aggregate demand," that is consumer spending, may work in some instances, but right now, it clearly was not. President Obama had unleashed an astonishing $5.4 trillion for just this purpose, but new studies showed that the multipliers were less than one, "meaning that for every dollar of 'stimulus' spending, the amount of goods and services produced by the private sector declines."[19] Keynesianism might work, Rickards concluded, but only in specialized situations.

Finally, Rickards disparaged the newest and most shameless breed of economic thinking, the "twin toxins," as he called them, of "efficient markets"

– theory and "normal distribution of risk." "Efficient markets" theory made the case that investors would act rationally in responding to price signals and new information, while "normal distribution of risk" argued that diversified portfolios that broadly tracked the market also opened the door to an explosive growth in financial futures and other derivatives contracts. But according to Rickards, both theories contributed to the 1987 stock market crash, the 1998 implosion of Long-Term Capital Management and, the greatest catastrophe of all, the Panic of 2008.[20]

Rickards was providing superior forensic analysis, but, characteristically, James Dale Davidson and Lord William Rees-Mogg, had already struck at the heart of the issue in 1993 with *The Great Reckoning*. Familiar with Kondratieff's long-wave theory, they wrote that the weakness of the Keynesian prescription is that governments cannot suppress the economic cycle. They can delay it, but they cannot suppress it. Moreover, central banks cannot create capital.

> It is all too simple to think that central banks have magic powers. They don't. They can create liquidity by creating debt. But this is not the same thing as creating capital. Any time a central bank monetizes an asset by buying it, in essence, with printing-press money, it also creates a liability. Turning on the presses at a high speed destroys more wealth than it creates.[21]

In other words, whatever the prevailing economic theory, only the private sector – not just the big-gun corporate sector but also you and me as investors – can create capital and, despite being in possession of huge hoards of cash, it was not budging, at least not while sovereign and banking debt hovered at the precipice.

The risks were enormous. If the euro had been seriously compromised, now nothing less than the U.S. dollar's status as the world's reserve currency was at stake. James Rickards and precious metals investment magnate Felix Zulauf joined Nouriel Roubini and Jeremy Warner in speaking openly of an end game, if not for one currency, then another. Arguing for the return of the gold standard more aggressively than even Ron Paul, Rickards invoked complexity theory to explain the potential catastrophe at hand. Diverse, connected, adaptive, and interdependent systems interact in dynamic and synergistic ways, Rickards said. Like the snowflake that causes an avalanche, it is not the snowflake that matters but that a "*catastrophe cannot be bigger than the system in which it occurs* … man-made systems increase in scale all the time … Financial markets are complex systems nonpareil."[22]

With the collapse of the dollar now in play, Felix Zulauf told his *Kingworld*

News listeners in July that the world had not seen anything like this in one hundred years. For a while, central bank printing might not be inflationary because it was filling an enormous debt hole. "Extreme deflation in the system keeps the consumer price index benign and interest rates low," he said. "At some point this will change. Then we'll get inflation."[23] A Weimar effect was under way but would not manifest itself for at least another twelve months, added Zulauf, who had previously accurately predicted a nasty late summer plunge in the markets. He went on to say that currencies will go down the drain with no capital flowing with a new "dirigiste" world resulting that would resemble the old Communist bloc. Not a meltdown, they will not let that happen, Zulauf opined, but there will be a change in the rules and a loss of freedom.

Like Zulauf, Jürgen Habermas mourned the state of today's "post-democratic" Europe. Where once there were enemies, today there are markets, Habermas, Germany's most important philosopher, constitutional theorist, and European champion, told *Der Spiegel*.[24] Indeed, technocrats trained by Goldman Sachs were assuming leadership roles in Greece and Italy. Even the much-admired Bank of Canada governor Mark Carney, by then head of the Financial Stability Board, was an alumnus of Goldman Sachs.

Former IMF chief economist, Simon Johnson, co-author of *13 Bankers* and passionate authority on the failure of bank regulation, completed the escalating round of dire warnings. Nothing had changed since 2008, and another great depression threatens, he told his audience at a conference in Iceland in October 2011. The world's "too big to fail" banks were, given their global reach, beyond "regulational authority."[25]

Pursuing its inexorable path, the American debt crisis lumbered on. Now, Jefferson County, Alabama, was deposing Orange Country, California, as the largest municipal bankruptcy in U.S. history while Detroit, GM headquarters and standard-bearer for the auto industry, appeared to be on track to run out of cash by 2012.[26] And Laurence Kotlikoff, the economics professor at Boston University, was once again reminding everyone that the U.S. fiscal gap – the difference between the government's official debt added to its financial commitments under various entitlement programs and the amount of taxes current and future citizens will pay – was $211 trillion.[27]

In other words, the U.S. was bankrupt, a fact that Ben Bernanke all but confirmed when on April 25, 2012, he warned that the U.S. government was headed for a "fiscal cliff," a disaster the Federal Reserve would be powerless to prevent should Congress enact a series of tax increases and spending cuts

scheduled to take effect on January 1, 2013 – to which Kotlikoff helpfully added that, with ten thousand baby boomers retiring each day and collecting $40,000 per person per annum in entitlements for the next two decades, the issue was hardly a fiscal cliff, it was more like a fiscal abyss.[28] Chiming in, one of Canada's pre-eminent economists, Jack Mintz, confirmed that the situation in the U.S. was worse than that in Europe. At least the EU was dealing with its fiscal crisis, but the U.S. instead seemed "paralyzed."[29]

Calls to increase inflation as a way to boost the economy were growing. Led by Kenneth Rogoff, the perspicacious former chief economist at the IMF and co-author of *This Time Is Different*, these voices argued that inflation levels of 4 or 5 percent would encourage investment, consumption and bring housing prices in line.[30] Moreover, inflation was the government's best shot at reducing the national debt – by half, some calculated, and within ten years. Never mind this would mean more money printing at a time when the monetary base had already tripled in the last couple of years from $800 billion to north of $2.5 trillion.[31]

The philosophical dichotomy between austerity and growth was driving rancorous debate on both sides of the Atlantic, Boeckh observed. A long-term plan to bring debt in line with capacity was needed in Madrid, where Spanish banks held $41 billion in "unsellable" real estate,[32] as well as in Washington, but austerity, combined with global deleveraging, would lead to a catastrophic collapse of aggregate demand, that is, the kind of spending needed to keep economies afloat, he wrote.

Such a plan was not to be. On November 21, 2011, the bipartisan Super Committee, appointed for this purpose by President Barack Obama, dissolved and retreated in failure. By September 2012, Fed chairman Ben Bernanke was making monthly purchases of $40 billion in mortgage-backed securities to which he added $45 billion a month in Treasuries purchases – an exercise with costs projected to reach $1.14 trillion by 2014.[33] Along with the storming by Al Qaeda of the U.S. consulate in Benghazi, James Rickards would conclude that "not often do geopolitics and economics converge as powerfully to produce a single warning as they have in the past two weeks. The dual tragedies of the assault on the U.S. consulate in Benghazi and the assault on the dollar by the Federal Reserve are the harmonic resonance of U.S. weakness at home and abroad."[34] By January 2013, with the U.S. having negotiated itself away from slipping over a "fiscal cliff" but with a "debt ceiling" threatening non-payment of government bills and benefits, talk at the World Economic Forum in Davos turned openly to fixing the "broken Western state model" with sterile

discussions about austerity and growth. "Governments need to get used to lower spending levels…. Individuals need to get used to lower pensions and welfare payments … and businesses need to get used to the costs that come with it and bear their part," Paul Polman, chief executive of consumer goods giant Unilever, explained in an interview with *The Telegraph*. "People are realizing in the West that our model is not a sustainable model," he continued. "The dynamics have now completely shifted but politicians don't want to explain that to people … vested interests take too big a share of voice."[35]

Then, on January 30, 2013, the markets stood still as news of the first contraction in the U.S. economy since 2009 sank in while, in the background, news of Detroit's imminent bankruptcy led to speculation it could help the city "throw out its collective bargaining agreements" with the "whopping 48 bargaining units that represent most of its workforce."[36] Detroit's capitulation, the first of what America's Cassandra, banking analyst Meredith Whitney, cautioned would be many more, would finally arrive in June 2013. Now in a state of rapid decay, drowning in debt, and with municipal workers facing catastrophic pension plan losses, Detroit defaulted on $2.5 billion worth of unsecured city debt as the unheralded end of the American-led oil and auto era slipped away in quiet ignominy.

Fingers Crossed

In India … three hundred million people have never taken a trip to visit family or friends in a distant city and they have never bought a tube of toothpaste. Consequently, companies like Thomas Cook and Colgate are experiencing tremendous growth not just in India but also in other emerging markets.

–JOHN BUDDEN[37]

Brazil, Russia, India, and China, with almost half the world's population and consumer-driven as well as export-driven economies, were now attracting major investment, and their leaders were discussing alternatives to the U.S. dollar as a trading currency. Even so, their fortunes, particularly those of China, would not be unaffected by the woes of the EU and U.S. Second only to the U.S. economy in size but easily the more competitive, China's largest market was Europe. And so long as the EU and the U.S. were buying Chinese goods, even with Chinese credit, the Chinese economy flourished. But success had come at a price. China's cheaper, harder-working, and savings-oriented labour force had out-competed the very workers who were their customers in the U.S. and

the EU. Since the 2008 meltdown, EU and U.S. purchases of Chinese goods were drying up, along with their credit lines. Even so, pundits, politicians, and central bankers blamed the undervalued yuan, which made Chinese exports cheaper and imports more expensive, for their woes. A higher yuan meant the Chinese could buy more Western goods, but the real game was productive capacity, and the West was losing that game badly, with or without controversial exchange rates or euphemistic calls to "rebalance" the global economy.

The Chinese responded to the West's declining purchasing powers by focusing on its internal economy with massive stimulus programs, but problems existed there, too. Mass migration from the country to the cities required high rates of employment, lest idle hands create social instability. And when massive infrastructure programs and rapid industrialization weren't literally going off the rails, as one newly built bullet train did in July 2011, they were taking their toll on the environment. The costs of cleaning up after thirty years of pollution could be as high as 4 percent of its GDP per year.[38] Inflation, too, was taking its toll. Officially 5 percent, higher agricultural input costs (thanks to quantitatively eased asset inflation in the West) for growing consumption of meat meant a much more rapid rise in food costs. Housing prices, too, were "frothy," as economists called the period before a full bubble formed. In February 2011, Chinese Premier Wen Jiabao reduced growth targets from 8 to 7 percent, saying, "Rapid price rises have affected the public and even social stability."[39] By November, China was successfully deflating its housing bubble with price reductions some analysts thought might reach as much as 15 to 30 percent over the next two years. With so much of the West in a slump, markets worried that China would no longer be a source of demand growth. Most ominous, debt to GDP, already 159 percent in 2008,[40] was probably much higher in 2011, a time when local government debt (not included in GDP calculations) was also skyrocketing.

Could China afford to continue the role it had assumed in 2008 as the engine of global economic growth? There was no question it still had a lot of U.S. dollars accrued from years of profitable exports to the U.S., but these increasingly bought energy and other assets around the world that would serve its own needs, not necessarily those of the global economy. These purchases included a major port in Greece and the possible development of a 220-kilometre rail link alternative to the Panama Canal. Uniting the Atlantic and Pacific Oceans with the Panama Canal symbolized American ascendance in 1914.[41] More than any military adventure, the rail link, a harbinger of a New Silk Road, would symbolize Chinese ascendance. And, after all, Chinese

consumption of automobiles continued apace with Honda and GM forecasting a rise of 10 percent in passenger-car sales in 2012,[42] not to mention that fabled international investors Jim Rogers and Marc Faber made their homes in Singapore and Thailand respectively. Yet, and yet … whatever its future designs, China still needed to export to bankrupt consumers in Europe and America, while nations like Canada and Australia looked to China to buy their resources. Germany, particularly, depended on export of its high-end auto trade to China. Never mind complexity theory, the interdependencies among these shaky economies were now conspicuously creaky in trade as well as financial terms.

Austerity? Growth? Liquidity? Insolvency? Could the doves and hawks on various parts of the ideological spectrum agree on a course of action to steady the global economy? Was an orderly repudiation of global debt probable, even if it was possible? Would a leader emerge in 2012 who could draw everyone together to do what needed to be done? Or would a Black Swan, such as a war in the Middle East, where analysts talked openly of a pre-emptive strike against Iran, including one by the Saudis who have newly installed Chinese missiles aimed at Iran,[43] swoop in to do the job for them? By September 2012, Western allies weren't taking any chances as a large fleet of international naval vessels arrived at the Straits of Hormuz, ostensibly to engage in military and minesweeping exercises, but more likely to ensure the Straits would remain open in the event of war.

At least those trillions of dollars of Credit Default Swaps (CDS) weren't being triggered. In a move that angered CDS holders of Greek debt, the International Swap Dealers Association (ISDA), a lobby group for the large American banks underwriting the swaps, deemed that, having taken a 50 percent haircut on their Greek bonds in March 2012, Greece technically was not in default so CDS insurance claims would not be paid. While this raised serious questions about contract law, the world could be forgiven for heaving a collective sigh of relief because, earlier, in November 2011, the egregious nature of these financial instruments was fully apparent. Wearing his "man on a mission" hat, James Rickards explained it as follows: Much in the way a homeowner might buy fire insurance on his own home, a CDS facilitates the purchase of insurance on the health of a government economy. The big difference between the two is that anyone can buy a CDS, not merely the holder of the debt. Imagine trillions of dollars of insurance being held by other people on your home! And rooting for it to go up in flames! While the insurer makes a tidy profit collecting the premiums on the policies, can he pay up if your house

burns down? In other words, if the CDS were triggered, another Lehman-like global crisis was possible because American banks are widely believed to be unable to back the insurance claims.

Narrowly escaping a CDS catastrophe offered momentary distraction from two similar catastrophes already under way. Dexia, a pan-European retail bank based in Belgium, was first caught by the subprime mortgage crisis in 2008. Resuscitated by bail-out money, it went on to incur massive PIIGS debt, with particular exposure to Greece. A bank stress test in July 2011 did not take into account the fact that, although Greece might default on its bonds, its real problem was access to liquidity as efforts failed to clear its balance sheets of risky assets. On October 4, 2011, France and Belgium announced plans for a second rescue.[44]

Three weeks later, MF Global was not so lucky. With $41 billion in assets, it was the eighth-largest bankruptcy in U.S. history. Also heavily exposed to PIIGS debt, ostensibly guaranteed by the Emergency Financial Stability Fund and backstopped by the Chicago Mercantile Exchange, MF Global was leveraged 30 to 1 and, when its shares fell 47 percent in one day, a liquidity crisis resulted. With bankruptcy proceedings unfolding, traders' accounts were frozen and some $633 million of client funds disappeared.[45] Few expected to get anything back, raising questions, once again, about the state of contract law in the U.S. More likely, the money simply was not there.

With the dread certainty of a Hitchcock movie, Dexia and MF Global were two renegade cygnets from an armada of Black Swans gathering on the European horizon. Meanwhile, like a heroine in an ancient Greek tragedy, the newly appointed head of the IMF, Christine Lagarde, bemoaned her poorly capitalized European banks.

The European Central Bank's twenty-three-strong governing council was meeting on December 8, 2011, to approve the Long-Term Refinancing Operation (LTRO), a legacy plan bestowed by Jean-Claude Trichet to his newly appointed successor, Mario Draghi.[46] It would provide three years' liquidity to European banks to the tune of 489 billion euros, or about 5 percent of eurozone GDP so they, in turn, could buy sovereign debt that the ECB itself, prohibited by EU constitutional law, could not. But the international Lords of Finance, Mark II, weren't waiting for the result. On the morning of November 30, 2011, the Bank of England, the U.S. Federal Reserve, the Bank of Canada, the Bank of Japan, and the European and Swiss Central Banks pulled out their own bazooka. By reducing the cost for European banks encumbered by sovereign

debt to borrow in U.S. dollars, they hoped to drown the looming catastrophe with new liquidity. China, too, for the first time since 2008, lowered the reserve requirement ratio for its banks in order to ease lending constraints.

The markets shot up, even as the Governor of the Bank of England, author of the central banks' bazooka plan, Sir Mervyn King, warned that "the crisis in the euro area is one of solvency and not liquidity. And the interconnectedness of major banks means the banking systems and economies around the world are all affected. Only the governments directly involved can find a way out of this crisis."[47] It would prove to be the first of several bazooka-type initiatives that culminated in September 2012 as Mario Draghi, then Ben Bernanke, and others, permanently opened their spigots to do whatever it took to keep the financial systems liquid.

For now, the twenty-first century's Credit-Anstalt moment would have to wait.

No Man's Land

We're in no man's land. Time to be extremely careful. Anyone can win in a bull market, but survival in a bear market is quite another matter. Don't confuse a bull market with brains!

–JOHN BUDDEN[48]

As Anthony Boeckh forewarned, all that liquidity had to go somewhere, and the stock market proved to be destination number one. I, among many millions the world over, was a beneficiary. But having effectively recovered my losses by early 2011, the September/October 2011 market correction sent my portfolio and my emotions back to their 2008 lows. The old adage "sell in May and go away" never more true than it was in 2011, landed like a sledgehammer, but too late. All the old recriminations came pouring back. I had been staring at charts for months – what went up came down, you sell into a rising market and buy when it is declining! The writing was on the wall: we were heading for a depression; this was the next step down in a downward-trending market that would eventually hit lows lower than 2008. What was I thinking? By now, I had become John Budden's most reliable contrary indicator. Such moments were a sure sign, he said, that the markets had bottomed and would turn. But I had also learned something of my own tolerance for risk. This time I did not sell at the bottom. Also, despite withdrawals for income and debt repayment, I had preserved capital. My value investing fund, after 20 percent gains through to the summer of 2011, was holding up.

"Precious metals are a hedge against deteriorating currencies," wrote John Budden on March 30, 2011.[49] As for the rest of my portfolio, I had opened my own online direct investing account with a major institutional brokerage firm in spring of 2010 and, by September, I was fully invested, mostly in gold. Budden, a committed gold investor since the 1970s, was influential in this decision, but, by this point, my own research had revealed the important historical role played by gold and its potential for a similar role in the future. Yet, while gold, like the rest of the stock market, rose steadily through 2009 and 2010, by 2011 it was clear it, too, was in for a bumpy ride.

But the market was rife with rumours of manipulation or, as John would say, the Plunge Protection Team, that bevy of Washington/Wall Street insiders joined at the hip, who, with a wink and a nod, really know how to dress up a market! More likely, though, it was some bullion bank crony of some country's central bank that was doing the selling, the buying, the leasing, and the short selling. Why? From the debasement of gold currency in ancient times to interventions in the gold market by Franklin Delano Roosevelt and the London Gold Pool, it was clear the authorities did such things. Moreover, despite interest in a role for gold in the monetary system from such luminaries as World Bank President Robert Zoellick, James Grant, and the *Wall Street Journal*, establishment economists like Nouriel Roubini and central bankers like Mark Carney were adamantly opposed to any notion of a return to the gold standard, much less the idea of gold as currency, even though such ideas were now being widely circulated and several U.S. states had already formally adopted gold as money. For all the heft of open markets, governments and central bankers had very powerful tools with which to crush such movements. This raised the question of whether or not, as a gold investor, you could "beat city hall."

Yet the weight of history behind gold was so strong, in monetary and commodity terms, that it could not be ignored. For this reason, I stuck with my gold investments and have included a chapter on gold fundamental, technical, and monetary considerations as a *Dog Bone Portfolio* appendix.

"The markets are going up and down like a toilet seat on quantitative autopilot," Budden quipped in March 2011, adding, a month later, "*Plus ça change, plus c'est la même chose*. People lose money buying the peaks and selling the dips."[50] If I had been unhappy with my experiences with an institutional brokerage, managing my own portfolio for the first time rendered its own set of harsh lessons. Three months of intensive day trading, first with a practice

account, then with a small amount of money, taught me that this technique required a specific temperament, a willingness to become intimate with the rhythms, personalities, and trading culture of a particular stock, and a great deal of patience and time to devote to the task.

But buying and holding, even given good stock choices, had its challenges as well. Where once fundamental, technical, and seasonal analysis would suffice, particularly through 2009 and 2010, now macro considerations were uppermost. Ready or not, investors were, like the economy, "globalized." At any time, any announcement from any part of the world, whether the latest manufacturing or jobless numbers, or whether a plan had been agreed by the G20, the whole market could, and did, move down. Or up. The short amount of time I did devote to day trading made me aware of the disciplines and skills I needed to develop over the longer haul, particularly with regard to determining buy and sell points for any stock at any given time. These were appearing with great regularity. To keep things manageable, I balanced my portfolio over only a few stocks divided between gold and silver bullion, some junior and senior mining shares, and a precious metals fund.

As for bonds, John Budden's observation, "Bonds let you sleep at night but you can't eat," summed it up.[51] Corporate bonds remained surprisingly attractive but, after learning about the state of global indebtedness, refraining from sovereign bond purchases and banking instruments was simply a no-brainer. Even in Canada's healthier economy, returns were unlikely to keep pace with inflation.

My other investment decisions weighed heavily. Like many approaching retirement, my husband and I had a considerable investment in our home, with a small mortgage of about 10 percent of our total assets still outstanding. But our home needed upgrades and repairs, which raised those liabilities to 20 percent. And overheads, such as property taxes, given our downtown Ottawa location, were likely to rise, while food and fuel inflation, which is not included in government inflation calculations, were already gurgling in the system. Low interest rates and rising house prices persuaded us to stay invested in the markets rather than pay down debt, but now, with volatility entrenched and a steeper decline in the markets looming, whether or not to pay down debt was once again a pressing question.

Our biggest advantage was the fact we lived in Canada. Or so it seemed.

The Real Canadian Story

If you ask a Canadian what their religion is they will probably give you the name of their chartered bank. Canada's banking system is in better shape than that of the U.S. or Europe but longer term the Chinese have their eye not only on Canada's resources but also on our financial birthright.

–JOHN BUDDEN[52]

The world looked to Canada as the home of fiscal rectitude. Canada had a banking system that apparently needed no bailouts; its government was stable; the country adhered to the rule of law; and a well-developed resource sector, particularly in oil, mining, and agriculture, had placed the country first in IMF forecasts for growth among the G8. *Forbes* magazine in 2010 went further, suggesting the twenty-first century might belong to Canada. "Canada, with its relatively small population of thirty-four million, has the lowest debt burden of any G8 country and less than half the per capita debt burden of the U.S."[53] Yet worrying signs were appearing. With a loss of 300,000 jobs between 2007 and 2009, Canada's largest province was suffering the effects of a high Canadian dollar, rusting steel mills, and a loss of car manufacturing plants. For the first time in its history, Ontario became a so-called "have-not" province, requiring federal fiscal transfers of the kind the EU, not being a fiscal union, was not able to give to countries like Greece and Portugal. Ontario was not alone. Quebec, with its low fertility rates and a debt to GDP ratio of 94 percent, fifth in the world behind Japan, Italy, Greece, and Iceland, was now behaving like a peripheral European country. Moreover, by 2011, Canada had the highest household debt-income ratio in the G7.[54] A robust housing market, in which the price of the average house had doubled in ten years, was being fuelled by low interest rates, low down payments, long periods of amortization, and one of the highest rates of per capita immigration in the world. All of which, according to Bloomberg, based on Bank of Canada figures, added to overall debt levels of $791 billion in mortgages and credit line debt, a record 62 percent of the economy.[55] Moody's Investors Services placed the total of mortgages at $1 trillion.[56] Not to worry, though. Canada's equivalent of Fannie Mae and Freddie Mac, the Canada Mortgage and Housing Corporation (CMHC), had the situation under control. Thirty percent of the mortgage market was insured, thanks to the Canadian tax-payer, then bundled and financed in the international bond markets where they sold like hotcakes while questions about the moral hazard at play were neatly swept under the carpet.

A chart from the Bank for International Settlements, however, told the real

story: With 2010 ratios of 113 percent government debt to GDP, 94 percent corporate debt to GDP, and 94 percent household debt to GDP, Canada ranked as one of only three countries in the world (Portugal and the U.K. were the other two) above all three BIS threshold levels.[57] Other countries were above the threshold in only one or two of those sectors. Moreover, a subsequent study, also from the BIS, concluded that debt turns "bad" at around 85 percent of GDP for public and household debt, and 90 percent for corporate debt. When all simultaneously break these levels, the whole system is in jeopardy.[58]

In 2010, with 113, 94, and 107 percent debt to GDP for public, household, and corporate debt respectively, Canada was clearly in bad-debt territory, a situation that by 2013 had deteriorated even further as Canada recorded increases in government and household debt levels.[59]

Still, Canada's reputation as a prudent bean-counting nation prevailed. Its ability to become a global centre of finance seemed all but assured given it already boasted two of the world's largest insurers, five of the top ten banks in North America and Europe, and at least three of the world's top fifty pension funds.[60] The only other apparent risk was being the resource caboose in the economic engines of two large economies – that of the United States and, increasingly, China. Indeed, one analysis revealed that, after deducting oil, gas, and coal exports from its GDP, Canada was effectively in a recession. In any train wreck, Canada would be badly whiplashed, a fate made all the more probable when it became clear that the province of Alberta, the western hemisphere's only debt-free sub-national, was losing billions in natural gas royalties thanks to the shale gale.[61] By 2013, despite some jobs gains, over-leveraged consumers and a decline in house prices threatened to stall even Canada's profitable banks. The biggest decline in retail sales in three years, through December 2012, confirmed that Canada's growth rate had been stuck at 2 percent throughout the year.[62]

Staying Home in Droves

Here in 2011, 30 looks to be the new 20. Call it extended adolescence.

–JONATHAN CHEVREAU[63]

But nothing spoke more plaintively to a North American future of declining markets and stagnating economies than the sociology of the times. It was not the Occupy movements that had overtaken so many Western cities, including those in Canada – these were rapidly disbanding with the first snowfall of 2011. Social instability might be a factor in other parts of the world, but

Canada, until Montreal students rioted over a slight increase in tuition fees, seemed relatively immune. Japanification, the phenomenon that created two lost decades for a once-thriving Japanese economy, had arrived in the West in full force and effect. Young Canadians, Americans and Europeans in their twenties – 60 percent of Canadians aged twenty to twenty-four, 55 percent of American males aged eighteen to twenty-four, and 70 percent of young adult Italians – were staying home in droves. In the U.K., one in three parents were remortgaging their homes to cover the costs of having their "Yuckies" – Young, Unwitting, Costly Kids – at home.[64] While it is undoubtedly the case that these young people were avoiding entry-level jobs, a stagnating economy was clearly another big factor. This, along with a two-decade decline in the markets, is exactly what happened in Japan between 1990 and 2010.

So far, our twenty-seven-year-old son, then a Ph.D. candidate in psychology, had no need of financial help or living accommodation, but this could change. A House of Lords study in the U.K. established that young people were being priced out of a housing market driven by immigration.[65] Latterly, money leaving Europe was finding its way into London housing, raising prices. In Canada, Chinese entrepreneurs were snapping up prime real estate in Vancouver and Toronto. At first, experts denied a bubble was forming, but that one could occur was undeniably possible. Ottawa, a government town, had a stable property market, though even here, as I learned anecdotally, condo units were selling twenty at a time to the Chinese. In any collapse, it too would be affected. Accordingly, we considered selling. Had our debt levels been any higher, we would have done so, with a view to downsizing.

Real Wealth?

Real estate, though traditionally considered to be a sacred investment cow, can unexpectedly become a dead horse that eats.

–JOHN BUDDEN[66]

According to Davidson and Rees-Mogg, who in 1993 predicted price declines of up to two thirds in the U.S. housing market, household debt levels should be a manageable proportion of financial assets, that is stocks, bonds, and savings, because, in a deflationary depression, the value of real assets such as housing were subject to precipitous declines. In another section, they recommend selling outright "if your equity is less than 50 percent of its appraised value and/or your home represents more than 50 percent of your total assets."[67] As homeowners in the U.S., Spain, and Ireland, who had used their homes as

savings accounts, were discovering, such declines had serious consequences. In contrast, in an inflationary depression, financial assets lose value while real assets gain value.

But depressions can be both inflationary and deflationary.

According to Davidson and Rees-Mogg, if accompanied by "dramatic depreciations of currency,"[68] depressions are inflationary while deflationary depressions raise the value of cash. It depends on whether creditors are wiped out or not. Either way, purchasing power is lost and the demand for commodities falls. "Real wealth declines, undermining the collateral upon which the structure of debt rests."[69] Rich countries accept the deflation, and liquidate debts. The governments of less stable societies resort to the printing press. This reduction in the value of money means real income drops even more than in a deflation. The inflation may wipe away debt, and the government is typically overthrown. "The countries that have maintained constitutional stability in spite of the destabilizing impact of wars and depressions are few in number. Not coincidentally, they are all rich countries that have had deflationary rather than inflationary depressions."[70] Other than Switzerland and, arguably, Sweden, these countries are the U.S. and Britain and their English-speaking allies. Hyperinflation is unlikely, they argued, as too many financial assets would be wiped away, and, in any case, "advanced countries have not experienced hyperinflation except in conditions when they were already deranged by defeat in war … (but) much depends on how delusional and unstable politics becomes."[71]

In January 2013, watchdog website Zero Hedge gleefully responded to announcements of billion-dollar Government of Canada bond purchases by the Bank of Canada,[72] a process that had been under way for some time, with the news that the quantity of Bank of Canada bond purchases had increased by 47 percent year over year! Since $267 billion in debt was due in 2013, it concluded, more stealth bond purchases were likely.[73]

Quantitative easing had apparently arrived in Canada. Whatever the truth of these assertions, Canada's mainstream media certainly were not discussing it. Even when Moody's Investors Service issued a warning that Canadian housing prices, along with those in Spain, Australia, and the U.K., might fall precipitously – in Canada by as much as 44 percent following a severe economic crash – few paid attention.[74] Not surprisingly, by the spring of 2013, there was talk of American investors shorting Canadian banks!

Any way you looked at it, it did not look good. In the fall of 2011, Budden had summed it up as follows:

> We have a confluence of inflationary/deflationary forces at work and very few investment/hedge-fund managers are equipped to understand what they are dealing with. The rebound in U.S. housing is tepid, no meaningful U.S. job growth despite massive stimulus, … we can expect more stimulus before the 2012 Presidential Election. To quote Eric Sprott, "The U.S. dollar is the best horse in the glue factory." After the current upside blow-out, I expect the U.S. dollar to be competitively devalued. A weaker U.S. dollar will be needed to stimulate exports and pay off U.S. debt in devalued dollars; all within a global competitive devaluation environment. Gold and the Swiss franc should prove to be real money in the ten–fifteen years ahead which I portray as Kondratieff Winter.[75]

My instinct now was to pay down debt and to effect upgrades and repairs on our home as needed and as possible. Then it would be a matter of hunkering down and letting the Kondratieff Winter do its worst, while positioning for the upswing when it arrived. The test of how low markets will go will be the success of reflation efforts in Japan, wrote Davidson and Rees-Mogg in 1993,[76] adding that no recovery was possible until all the bad news was faced. This would take years, not months.[77]

Japanese reflationary efforts were, as we now know, not successful, though, in a conspicuous example of hope triumphing over experience, the Japanese would revive them in late 2012. This led to an immediate depreciation in the value of the yen and a commensurate appreciation in the Nikkei 225 or, as Budden described it on March 14, 2013, "the stock market is going up because the value of money is going down."[78]

Taking the 2000 stock market crash as the beginning of the Kondratieff Winter, investing was no longer a matter of quick returns in a long-running bull market. Or was it? On March 5, 2013, in a surreal separation of the markets from anything justified by the real economy, the Dow Jones Industrial Average reached an all-time high of 14,253, a level last seen on October 9, 2007. Yet, while the Dow had doubled since 2009, the real economy had grown only by 7 percent. Attempts to avert fiscal cliffs and sequestration left the U.S. economy nearer recession than growth and, if stocks were rising, earnings expectations were being downgraded.[79] In England, there was chatter about a triple-dip recession. As Budden explained to his listeners, "It's called the wealth effect. If you can't make real estate go up in the U.S., then you've got to try and make stocks go up because that's what makes everybody feel good about their retirement accounts and other portions of their wealth. The Dow has gone up about 176 percent, as of April 2, 2015, from its low point of 6,443.27 on March 6,

2009. It's possibly attributable to China vowing to maintain their growth targets and investors certainly feel that central banks are going to continue their growth stimulus measures. When you print money, there is a devaluation effect and stocks become a viable but short-term alternative to owning competitively devaluing currencies."[80] Richard Russell, the ninety-year-old godfather of newsletter writers and Dow Theory specialist, concluded that, despite the Dow Transports confirming the Dow Jones Industrial Average, a sign, according to Dow Theory, that the bull market was intact, this was "… something never seen before, namely new highs during a post-crash upward correction. My explanation of this unprecedented situation is that the advance to new highs was a direct result of never-before-seen manipulation by the Federal Reserve."[81] When, in March 2013, the Bank for International Settlements expressed concern that the markets had become dependent on central bank and government stimulus, even as global debt among households, corporations, and governments had risen by $30 trillion since 2007,[82] you knew something was very wrong. So, apparently, did the Federal Reserve. On May 22, tapering talk began as Chairman Bernanke advised a congressional panel a reduction in bond purchases could commence later in the year, provided the economy was strong enough. Once again, the markets, uncertain about what the removal of quantitative easing might mean, trembled.

And, indeed, for a lay person, it was difficult to reconcile the debt crisis, the monetary crisis, and all manner of crises with the bull markets that central bankers had so carefully crafted. If anyone cared to look, however, other indicators told a different story.

As Larry Jeddeloh would comment, "The Baltic Dry index is near the lows of 1998, 2001, and 2008, yet I am not aware that we have an LTCM Crisis (1998), a NASDAQ bubble popping (2001), or a world financial collapse unfolding (2008)."[83] The Baltic Dry Index assesses the price of moving the major raw materials by sea. Tanker stocks, Jeddeloh concluded, were behaving as if world trade was never coming back. And if you "corrected" stock prices for the Fed's interventions, the Dow was in fact down more than 50 percent from its 2007 highs. Using changes in the consumer price index, it was down nearly 20 percent.

But where the Fed faithful were concerned, Chairman Bernanke had delivered even though he had produced no "real" returns for investors and was having little effect on the real economy. Robert Shiller, a 2013 recipient of the Nobel prize in economics and whose Case-Shiller Home Price Indices measured U.S. residential real estate prices, described the 12.1 percent

year-over-year recovery in prices announced in August 2013 as "speculative" and "(un)real";[84] the jobs creation picture was overwhelmingly dominated by part-time work in the retail sector;[85] and thirty-eight million working-age American households didn't have any retirement savings.[86] Then there was the all-important Kondratieff indicator, the Durable Goods numbers. Airplane orders were down over 52 percent; transportation down over 19 percent; computers down almost 20 percent; and manufacturing down almost 10 percent. Worse, capital expenditures by corporations were next to nonexistent. As Don Coxe, the veteran commodities analyst and portfolio adviser to BMO Asset Management, would observe, "When we see that corporate cash is being used to buy back stock and pay dividends, the decision-making force in the system becomes stockholders redeploying cash … (Capital expenditures are) putting money out at a great cost, where companies get no immediate returns from it, whether it's building a new building or opening up a whole area of the country. When you take that out of the system, the result is that you turn the system on its head … The decision makers are no longer focused on creating economic growth through capex and expanding production."[87] Then there was the fact that Bernanke's quadrupling of the Fed's balance sheet, in addition to the stock markets, had also stimulated the emerging markets, which, hard upon the taper talk, were in a state of upheaval at the prospect of the removal of all that cheap money that had flowed their way. As the *Financial Times* described it, global corporate debt issuance had been tumbling since May with the steepest decline in emerging markets where sharp price falls in both bond and equity markets had led to investors withdrawing capital.[88] A worse crisis than the East Asia crisis of 1997–98 seemed possible, a harbinger of which was the 20 percent decline of the Indian rupee. Reuters, too, acknowledged that

> U.S. stimulus had helped flood developing economies with cheap liquidity and concerns those inflows could now reverse are preventing policy makers in many emerging economies from easing (their own) monetary policy to shore up slowing economic growth. Brazil was expected to raise interest rates … for the fourth straight time … to try and stem a massive outflow of capital that has dragged the real to near five-year lows.[89]

India, Indonesia, and Thailand were already suffering from an outflow of hot money from their bonds and their stock markets as the prospect of an out-and-out currency war, along with heightened tensions over the prospect of Western intervention into the Syrian civil war, raised the international stakes, financially and politically. While Syria had no significant oil deposits,

it had important gas transmission infrastructure. Iran, however, had a very big interest in seeing oil prices go higher; indeed, Iran may have even been responsible for the chemical attacks in Syria, prompting Larry Jeddeloh to remind his readers of what high oil prices did to the global economy in the 1970s and in 2008.[90] As for the emerging economies, Ambrose Evans-Pritchard cut to the quick: "Emerging markets are now big enough to drag down the global economy," he wrote on August 28, 2013. In the 1980s, they were only 15 percent of global GDP when then Fed chair Volker's tightening "brought Latin America crashing down." By 1998, when Russia defaulted and Fed chair Greenspan had to bail out hedge fund Long Term Capital Management, they were a third of global GDP. Today, according to IMF data, "Emerging markets are half the world economy,"[91] Evans-Pritchard added, uncharacteristically failing to note how European banks are exposed to emerging market debt and American banks in turn exposed to European debt. Never mind they were also selling U.S. Treasury Bonds to support their failing currencies.

Most telling, however, and having fluctuated between 1.6 percent and 1.0 percent between August 2012 and April 2013, was the rise in the ten-year U.S. Treasury yield to 2.7 percent. Despite relatively strong U.S. corporate bond issuance and repeated assurances from Mark Carney, now governor of the Bank of England, the ECB's Mario Draghi, and Fed chair Ben Bernanke himself that interest rates would remain low for some time, this was a precipitous increase of 97 percent from its July 2012 lows and the largest one-year percentage increase since rates peaked in 1981.

As John Budden would explain to me, the Lords of Finance Mark II were no longer in control of interest rates; control was in the hands of those traders doing the bidding and the asking on the bonds they were buying and selling. The bond vigilantes, having been neutered and consigned to the sidelines by central bank policy, were back in action and driving rates up.

As Tony Boeckh had warned, all that liquidity had to go somewhere. Now we knew where: speculation in some equity areas, real estate, and fixed income products, as well as a number of emerging markets. This liquidity also had a hand in increasing private debt in countries like Canada, Brazil, China, and Indonesia while, at the time, as Boeckh would recount, "making it easy for sovereign debtors (excluding the PIIGS) to finance their fiscal profligacy."[92] Could it, would it, be "tapered" in the foreseeable future, and, if so, what consequences would follow such a move?

One thing was certain. For this, the first Kondratieff Winter of the twenty-first century, there was no end in sight.

EIGHT

Investment Realism: John Budden and Friends

If you want to learn the best practice for your treasured assets, where should you go? Wall Street? The computer store? Or a canine kennel?

You guessed it right. The simple uncomplicated solution is usually superior so your ever faithful friendly dog will guide you. He has a smell talent fifteen times greater than humans and knows that diversification of locations is his best protection. And only he knows the locations.

What can we learn from him? Everything about asset preservation.

–DEAN LEBARON

This chapter contains John Budden's interviews with financial experts Dean LeBaron, J. Anthony Boeckh, Ian Gordon, Larry Jeddeloh, Don Lindsey, the late Lord William Rees-Mogg, Jim Rogers, Eric Sprott, and Ronald-Peter Stöferle. Some took place over a period of time; only the date of the most recent interview or update is indicated. In some cases, no update was possible (e.g., Lord William Rees-Mogg's interview; he passed away in 2012) or necessary (Larry Jeddeloh).

John Budden's Interview with Dean LeBaron

January 2015

About Dean Francis LeBaron

Dean LeBaron is an alumnus of Harvard University and a Baker Scholar graduate of the Harvard Business School. Dean is founder and former chairman of Batterymarch Financial Management.

An "investment futurist," Dean was one of the first to see the potential of quantitative investing, using computer-driven technology and modeling techniques at Batterymarch to systematically analyse data, implement trades, and manage investment portfolios. Under his leadership, Batterymarch pioneered indexing as an investment strategy. An early adopter of a contrarian philosophy, Dean followed his own advice that "in the investment field, you should be where everyone else is not," leading Batterymarch to become one of the earliest (or first) institutional investors in Brazil, India, China, and other emerging market countries. His interest and work in Russia resulted from an invitation from the government of President Mikhail Gorbachev to help privatize the Soviet Union's military industrial complex.

Exploring the linkage of complex adaptive systems to dynamic social systems, including investments, Dean was the founding publisher of Complexity Digest in 1999 (www.comdig.com).

Dean is the author of numerous articles and books, most recently *Mao, Marx, and the Market*, an account of his investment and personal experiences in China and the former Soviet Union following the demise of their command economies. His website <www.deanlebaron.com> provides a platform for his musings, experiments with new technologies and financial innovations, video commentary, articles, and speeches.

Dean earned his CFA charter in 1967 and, in 2001, was the seventh recipient of the CFA Institute's highest honour, the Award for Professional Excellence. This award, first presented in 1991 to Sir John Templeton, was established to honour a member of the investment profession "whose exemplary achievement, excellence of practice, and true leadership have inspired and reflected honor" on the profession.

Living in New England, Florida, and Switzerland, Dean strives to be the scholar and gentleman envisioned by his parents and teachers.[1]

■ ■ ■

John Budden: I am joined today by Dean LeBaron, who is the founder of Batterymarch Financial Management and an Adventure Capitalist. How are you, Dean?

Dean LeBaron: I am very well, John. Good to be with you.

JB: I understand it is about 50 degrees warmer where you are in Florida than it is here in Ottawa.

Dean LeBaron: It is, and depending on what the financial markets do, we may both start to experience some "heat."

JB: But I remember the days when I skied with you in New Hampshire so I know that you can take the northern climes.

Dean LeBaron: Unfortunately, you don't remember the days skiing with me in Switzerland where the slopes were steeper.

JB: That's a good starter because last week saw the revaluation of the Swiss franc which caused a lot of hedge funds grief and more than a few banks and foreign exchange dealers nightmares. I wonder if you could speak to the revaluation of the Swiss franc as a lead-in to your impressions of the opening remarks by Klaus Schwab, chairman of the 2015 World Economic Forum in Davos.

Dean LeBaron: Let me try, John. First of all, I must apologize to you and to your listeners, I should say our listeners, for being so hackneyed as to repeat some mantras from other times. Such as: "We live in interesting times." Or "We may be at the end of the beginning, rather than the beginning of the end." Or "Please, when you listen to my forecast, forget what my forecasts were in previous years; start with a fresh mind." Finally, as closet Kondratieff long-wave fans, you and I have felt for some time that we are in the midst of a transition period in which new thinking and entirely new environments would arise that would be totally different from those of the last fifty to sixty years in which we have had the opportunity to thrive.

And it is curious now, I notice, as I attend digital meetings and quantitative meetings, that the average age of the successful people is something in the order of twenty-five. The average age of the frustrated senior experienced wealthy people, and I include myself in that category, is seventy-five or eighty. There is a transition in age groups. And finally, we know that markets seem more likely to favour traders, with a trading mentality, rather than investors. Felix Zulauf, a well-noted fellow from Switzerland, said a few weeks ago that this was going to be a market for traders, not for investors. And so it seems volatility has picked up. Trading may have nothing to do with the underlying fundamentals, but it has a lot to do with changing prices.

Finally, we have always felt that derivatives and financial *paper* were designed by clever people, like you and I, to minimize risk in companies and in commodities and in various fundamental investments; our job was to minimize risk by creating these wonderful new paper instruments of forwards and futures and so forth. Now it is so ridiculous … there are so many paper instruments that the futures markets are now determining the fundamental markets.

So oil may not be priced at fifty dollars or forty dollars a barrel because of supply and demand of the product itself in the ground but rather because of the flow of paper that's on top of it, which is really the way most people buy and sell oil. But beware of the paper, which may catch fire in your hand. I think that is a good place to stop. We can go on from there.

JB: Now trading cuts both ways. People who were on the wrong side of the Swiss franc revaluation could have lost 40 percent, if they had to cover their position, overnight. And that speaks to the world we are in right now. You have a residence in Switzerland. You have lived in Switzerland. Are the Swiss just getting ahead of the financial game, as they have throughout history?

Dean LeBaron: The Swiss had to do, sometime, what they did, and it may be they felt better to be earlier in the process of removing market props rather than later when it could not be done at a timing of their choosing. They may still be in great difficulty; I include myself in that category because, as you point out, I am a resident of Switzerland.

It's curious that, at this very moment, the World Economic Forum in Davos is going on; it just started, and Klaus Schwab, Professor Schwab, who was the founder of that group, gave remarks yesterday which I thought were very prescient. He said that we stand at a crisis. Well, we might often say that, but he doesn't, so I know he felt it. We stand at a crisis – a crossroads! – and that of course fits into Kondratieff, although Professor Schwab probably wouldn't admit that. On the one hand, we have had in the past a world of financial and political integration – the North American Defense Treaty, the World Bank, the United Nations – all kinds of institutions that are consolidating different disparate interests. And on the other side we have fractionalization. Intense feeling to the point of killing and murdering and torturing people including, I might add, in my own country the United States with its record of violence. We don't talk about it, but it is right up there with the pros in the violence department and all the intensity with that. So, on the one hand, we have a world of integration, of harmony and of coming together to find solutions. On the other, a world of knock-your-head-off if you don't agree with me.

JB: Are major global decisions, by the powers that be, being made in a different fashion these days? There is no more need for high-powered gatherings like the Bretton Woods Conference, because central bankers can orchestrate their financial wizardry via internet or cell phone. Or meet at the annual World Economic Forum in Davos, where private meetings and a bit of "wink, wink" may result in determining our economic fate.

Dean LeBaron: Isn't that fun, John? That's quite right. We used to have a time in which major political decisions at least were made at places like Bretton Woods in New Hampshire at the Mount Washington Hotel, or they were made at Jackson Hole at the annual meeting of central bankers during the summertime. You sort of monitored to see a little bit of what was going on and see what the expressions were. Now that's not true. Now it is taking place online. Of course, in all probability the online e-mails and exchanges are bugged, so what we think are private conversations by these people may not be. But at least they are probably private as far as the public press is concerned. My guess is that the Swiss, who are well known for being in favour of privacy, recognize that they are not very private. Their move to revalue the franc was probably made in conjunction with, at least, a knowledge of what the attitudes would be of other people. But I am coming back to the fact that we've gone through a period in which free market price discovery, which dominated the period in which you and I lived our investment lives, was replaced by more of a political market in the last ten to fifteen years where policy makers felt it was their job to ensure the perpetuation of their own power base.

Those may be crumbling at the moment. Klaus Schwab was saying that we may be at a point of crisis. We may be determining which of these two worlds we will live in. Kondratieff Winter is the time in which we do that. You experience Kondratieff Winter temperature-wise, perhaps as well as financially.

JB: Now, our listeners and readers can access the speeches at the World Economic Forum by going to their website (<http://www.weforum.org/>).

Dean LeBaron: I highly encourage them to do that. As a long-time attendee and occasional speaker at the World Economic Forum over the last thirty years, I can say it is a marvellous experience. But in 2015, you must spend lots of dollars or Swiss francs, as the case may be; you won't get very much sleep; and it is snowing in Davos today. I strongly recommend that it is much more comfortable watching the World Economic Forum, as I was doing just five minutes before we started this interview, from your living room. And I feel I have just as much presence as when I was there, and I am far more wide awake. About a hundred of the two hundred eighty sessions that are being held are available online, which I think is a tremendous service by Professor Schwab. I commend and applaud him for this great public service. He is not given enough recognition for doing this.

JB: By attending via the internet, one probably saves $30,000 for that week in Davos. Being able to attend via the internet is one of the benefits of technology;

with a deflationary kicker. But now I'd like to address the dilemma of most investors and that is asset allocation and survival in these markets. If we are going into the seismic change of Kondratieff Winter, what should people be doing, given the proliferation of paper? In an era of global quantitative easing and competitive devaluations, stock markets have become a substitute for fixed income vehicles that in the past provided decent risk and inflation adjusted returns. Now most bonds offer return free risk.

Dean LeBaron: I agree with you about the frustrations. My first observation would be that as investors we should try not to remove all of the frustrations. These frustrations are an inherent part of a transition period. And if we try to remove the frustrations, we may make our situation worse. So we just have to live with that uncertainty. The first thing to do is be prepared for uncertainty and reassess your objectives for the future. One's goal should be to not lose very much money and to not try to make a whole lot of money by altering your investments, unless you are a twenty-five-year-old trader who doesn't know anything about the stock market. Then I say go for it; you may have a chance. That sounds stupid, I know, but it's true. I would also suggest that you be modest in your objectives. The argument goes that one should be fairly well diversified. I personally am not very diversified but most people seem to like investing in a well-diversified portfolio of liquid securities with relatively fixed rates of return. Gold, which you and I favour, has an odd combination of being a fairly fixed material. I mean, you can hold it in your hand and touch it. Gold feels a little warmer than other things, but at the same time it generally is quite liquid. It is unusual for a fixed asset to also have the characteristic of liquidity. The other advantage of gold is that you can hold it in physical form rather than buying a paper proxy. Of course, you can buy gold through paper vehicles like the SPDR Gold Trust (GLD) listed on the NYSE, along with others, if you're an American. Alternatively, you may want to hold your gold in a private room or private box, what I call the King Midas temptation, and that has great advantages. Thus you don't have to hold it by way of paper; you don't have to hold it through somebody else; and it is fairly liquid and should be readily available. As to what it will sell for in the future, I haven't the foggiest idea. On one hand, I can hope it sells for ten thousand dollars an ounce because that would be fantastic; on the other, it would be a disaster for the world because ten thousand dollars for an ounce of gold means everything else is "hell in a hand cart," if you will excuse the expression, and many other bad things will be happening. So I hope it doesn't occur, but if it does, at least I could probably buy a sandwich or two.

JB: Dr. Franz Pick described government bonds as certificates of confiscation. And earlier we categorized a lot of these bonds as return-free risk. For example, interest rates are negative on some Swiss and German government bonds. In Japan, you are lucky if you get 0.50 percent interest on a ten-year government bond. And the money that can't get a return by way of the bond market is gravitating to the stock market. Consequently, the stock market has done extremely well. What's your view on the stock market?

Dean LeBaron: I'm going to hedge that one because in the short run I have no views. In the long run, the stock market will reassess itself. And there will be some new leaders. I don't know … maybe agriculture-related leaders or maybe water-related leaders. It might be a handful of scientific stocks that will dominate the market. It's probably not going to be the old classics, like the drug stocks, a lot of which have depended upon political domination. But I don't know; that's just a wild guess on my part. I personally don't give advice on stock markets. I used to give advice on emerging markets and I own one emerging market but that's all. It's just basically to keep my hand in, more than anything else. But I do want to say that most of us who are investors, when we think of valuations changing up and down, including the U.S. S&P going up last year, are probably valuing things badly. We're using the dollar denomination. What the dollar is/was worth will probably be the subject of a "20/20 hindsight" discussion ten years from now. Let me use a silly example that may not be factored into investors' valuations and that is future tax liabilities that are not incorporated into the past gains. So, if my equity portfolio, let's call it an index fund, was up 10 percent last year, that's not right. It was up something less than that. Probably up 7 percent, after taxes, because I'm not incorporating deferred taxes of 3 percent on that portfolio.

Most of the investment accounting is wrong. And I was one of four people who determined how to count and keep track of institutional returns so I am 25 percent guilty of all the mistakes we are making.

JB: We're talking about a vast array of pieces of paper. Are the shares of some of the great corporations better pieces of paper than a lot of currencies and bonds out there? Then, I want to shift gears to a subject we have discussed in previous interviews. Are we now in a new era in which promises can't be trusted? Of course, that was the basis that we grew up on in the investment business. In the good old days, one could shake hands with people if you trusted them, and have a deal. But in this world of derivatives and counterparties a contract is only as good as its weakest link. What do you think about trust and contracts?

Dean LeBaron: Trust, I believe, is undergoing some revision because it is moving up in terms of the value we put on trust but it is moving down in terms of our ability to define it, at least at the moment, because we don't know all the links in that chain that you just referenced. And trust is as good as the weakest link, and we don't know where that is and how to measure what that weak link is. I'm a little suspicious of large, highly institutional companies. For example, I don't know who owns them. I'm pretty sure that it is not the ultimate beneficiary of a pension fund who owns a share of General Motors, Pfizer, or what-not. They are run by closed boards of directors, extremely highly paid executives. Are they run for the benefit of shareholders? Are they run for the benefit of consumers? Are they run for the benefit of workers? I'm not so sure. The notion that these companies are run for shareholders and should maximize shareholder value is being challenged, and it is being challenged in a very strong way. If we have some economic turmoil, I can certainly see some legal revisions in terms of the contract between stock ownership and investment performance.

JB: I wanted to ask you about the importance of getting as close to your investments as possible in this new era because putting your complete trust in depositories, banks, etc., may result in some big surprises.

Dean LeBaron: Absolutely. We have just learned, for example, that Deutsche Bank, to pick one, may have lost something like $150 million, overnight, on the Swiss currency exchange, or whatever. A week ago, no one would have thought of that as a possibility, but $150 million is something Deutsche Bank can absorb or at least if they can't, the German government would make up for it instantly.

However, you can't assess what the obligations are for many of these banks and how they will affect their ultimate depositors. Many major global banks are operating now at a higher rate of leverage than they were in 2008, the time of the last financial crisis, when they were leveraged in the order of twenty-five or thirty to one. Now they may be up to forty-five to one or something of that nature. So the leverage is even worse. We are counting on the fact that they are too big to fail, so to speak. And if they are too big to fail, then we know that they are counting on and will get government bailouts. But then if they get government bailouts, it may be that the government bailout is not worthwhile. The Federal Reserve in the U.S. is buying up bonds; the ECB just announced it would buy up EUR 60 billion worth of bonds each month. So you get this sort of cycling around; one supporting the other. And then eventually, excuse

another expression, it will be obvious that "the emperor has no clothes." When that will happen, you don't know. The element of complexity science, which is also part of this Kondratieff Wave, compares this to a sandpile onto which you drop a grain of sand, and you try to forecast when the avalanche will occur. But you can't. You know it will occur but it is totally unpredictable as to when the sandpile adhesion will give up and it starts crumbling away.

JB: I give you credit for coining the term "Dog Bone Portfolio," which is based on the theories of the now-renowned Russian economist Nikolai Kondratieff, who looked at economic long waves. Sadly, Kondratieff was executed by firing squad at the behest of Joseph Stalin in 1938. Would you be kind enough to explain your idea of getting close to your investments by way of physical diversification into secure dog bone holes.

Dean LeBaron: Sure. For investment advice, don't listen to me; watch your neighbourhood dog, or your own dog, as the case may be, for what he does with his assets. Our clever dog takes his bone and goes out to the backyard, or somebody's backyard, digs a hole, buries it, and fills it up. It is highly unlikely that he will bury his second treasured dog bone in the same hole – in fact, I know he doesn't because I've watched him.

If you give him a second bone he goes out and digs a hole that is in a completely separate location, away from the first. Our prudent dog wants to know that if somebody comes along and wants to take one of the dog bones they won't know where all the dog bones are. He controls the location. That is diversification of the *location* of ownership of your assets. You know where they are. This may seem like a ludicrous example, but dogs are not quite sure where the next meal will come from. So they have to be very careful.

From our standpoint, diversify the location of the ownership of your assets. I'm not sure diversification of assets is that great a deal, but certainly I would diversify the location and hold them in physical form where I know where they are.

JB: And the dog doesn't like to have intermediaries between his or her dog bones, and that's an analogy that we should take to heart because if there are too many intermediaries between you and your financial assets, those intermediaries may just get up to mischief and lend or co-opt those assets by way of derivatives, or whatever.

Dean LeBaron: We know that the agents are going to co-opt the assets by fees but that's a minor one, two, or ten percent a year. We are more afraid that, in

the event they have to save themselves from bankruptcy or what-not, they will take the whole thing, our financial dog bones.

JB: Dean, as always, this has been a great chat.

John Budden's Interview with J. Anthony Boeckh
February 2015

About J. Anthony (Tony) Boeckh

From 1968 to 2002, Mr. Boeckh was chairman, chief executive, and editor-in-chief of Montreal-based BCA Research (previously known as BCA Publications), publisher of, among others, the highly regarded *Bank Credit Analyst*, a monthly big-picture analysis of the U.S. economy and financial markets. He was also chairman of Greydanus, Boeckh and Associates from 1985 to 1999, a fixed-income investment firm that managed $2 billion in assets when it was sold to Toronto-Dominion Bank in December 1999. He is currently President, Boeckh Investments Inc., and Chair of the Graham Boeckh Foundation.

Tony has a Ph.D. in Finance and Economics from the Wharton School, University of Pennsylvania, and a Bachelor of Commerce from the University of Toronto. He spent four years in the research department of the Bank of Canada in the early 1960s working in the areas of monetary and economic analysis.

He taught economics and finance at McGill University in Montreal from 1968 to 1973 and has lectured at economic, financial, and investment seminars and conferences in various international centres in North America, Asia, and Europe. He recently authored *The Great Reflation: How Investors Can Profit from the New World of Money*, published by John Wiley in 2010, and co-authored *The Stock Market and Inflation*, published by Dow Jones-Irwin in 1982. He is a founding trustee of the Fraser Institute in Vancouver, British Columbia (an economic think tank dedicated to free-market principles).[2]

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John Budden: I am joined by Tony Boeckh, who is the author of *The Great Reflation*, which is a must-read not only as a financial primer but also as a roadmap for this incredibly challenging period. Tony, I must reference the conclusion in *The Great Reflation* where you say, "Unfortunately there are no magic bullets that will solve the great dilemma now facing all investors: how

to get a decent return while keeping risk at tolerable levels. Investors should be extremely wary of simplistic advice and promises of high and quick rewards. The great reflation has virtually eliminated returns on liquid, safe, short-term deposits or money-market funds while guaranteeing a world of high future risk and volatility." Now, you are familiar with the work of Nikolai Kondratieff, and I guess the first question I wanted to ask you is, how do you envisage the next ten to fifteen years for financial markets within the context of Nikolai Kondratieff's long-wave theory – referencing key macroeconomic factors and potential socio-political fallout?

Tony Boeckh: That's quite a challenge, to answer all that, but I think your choice of looking at this over a ten- to fifteen-year period really makes a lot of sense. Leaving the politics aside, we're into an economic crisis that we've never seen before in the rich world – Europe, North America, the advanced high-income-per-capita countries. There are many ingredients that have created this crisis, all very long-term in nature. That's why there is no easy way out of this, and that's why I mentioned in the book *The Great Reflation* there are no magic bullets for investors or for policy-makers to create a quick fix. And the sort of fixes that we've seen, with all the other recessions in the postwar period where policy would turn expansionary – central banks would expand money supply, lower interest rates, governments would increase fiscal deficits, spend more money, and we'd be on the road to an up-cycle – those days are finished.

I think you are right in making the Kondratieff long wave central to this because that is a key ingredient. Also, I throw Schumpeter into the equation because he was very much a long-wave guy and a much better economist than Kondratieff. Kondratieff showed mathematically that these long cycles existed, but Schumpeter really put the essence into it, which is the rise and fall of industries. You get new waves of innovation, and you get a lot of growth surrounding those. Then those industries reach maturity and go into decline for a whole bunch of reasons: new technologies, new areas open up. For example, when the American West and Argentina farmland opened up in the nineteenth century, it created havoc for European agricultural producers. So some industries are going up, some are going down, like the Japanese car industry that slaughtered the American car industry.

You have to see this as part of a process of rising and declining industries and geographic areas and new ways of doing business. What we've got now is the Kondratieff long-wave down cycle in the rich world with declining industries and declining real income that you can see in Europe and in North America. And you combine that with over-consumption – every family has,

you name it, five TV sets, two cars, washing machines, all the gadgets. Most families don't really need to spend more money on things like that. What they really need to do is spend money for their rent or for their mortgage, or for their food, that sort of thing. So people really have the ability to stop spending if they get scared. So we've got that ingredient in there.

And then, overriding this, is the debt problem. We have massive over-indebtedness of the household sector. The corporate sector is actually in pretty good shape because I think, in many ways, they've seen this coming, not all companies, but many companies.

Then you have massive over-indebtedness of virtually all governments in the industrial world. All these ingredients are working in the same negative downward direction. What can the authorities do about this? And the answer is, not much, because both monetary and fiscal policy are a spent force. Interest rates are basically at 0 at the short end of the yield curve, A Japanese ten year yields less than 0.50 percent and U.S. ten-year yields are now around 2 percent; at one point they reached 1.7 percent. Europe is a similar sort of story, with ten-year rates in Germany currently under 0.40 percent.

You can't get much more stimulus out of monetary policy. And, on the fiscal side, virtually every government is massively over-indebted. Sovereign debt problems exist virtually everywhere. So governments are looking to contract fiscal policy, not increase it to stimulate. This is very much like the 1930s where you had both monetary and fiscal policy unable to do much. On top of that, you've got the demographics. With shrinking populations, Europe, Russia, and Japan are particularly negative. The U.S. and Canada are a little bit different but, basically, a slow-growth, aging population causes problems for the labour force, for demand, for government services, for pensions and medical services, etc. A big problem with governments, as is well known, is that the entitlement programs that were created thirty years ago, when the life expectancy was about sixty-five, are now totally out of control because people live into their eighties and no adjustments were made for this. So that has to change. That's also going to be another negative for growth. So the only policy options for the government are, don't make things worse with counter-productive policies, which is difficult for most governments. What they really have to be focusing on are growth strategies to speed up the declining industries and move resources to foster and support the new industries. That's really the best thing they can do instead of trying to protect the old industries and lock resources into the declining industries. You want the resources to move to the new industries.

The second – and really critical – thing, is to protect the banking system so that this deleveraging process taking place in a very-low-growth environment with very frequent recessions does not create the sort of debt deflation that we had in the 1930s. But those are fairly passive policies. There's nothing really that the government can do to get us out of this mess that we're in. It's going to play out for years and years and years. And that's why I think your ten to fifteen years is an interesting kind of time frame to look at, because nobody has any idea how long this is going to take to play out. We're all just guessing. It may take five years, but I think it may take more in the order of ten to fifteen years before we can work our way through the problems to allow for the declining industries to get phased out and to allow the deleveraging process to get us back to a financial base where there's an equilibrium from which we can then grow again. So this is, I see, the basic picture out there.

Now there is one very big and important offset to this, essentially negative, picture in the rich world and that's the dynamic of emerging market countries, China, Latin America, and India, where something like two thirds of the world's population have now deregulated to a large extent and are getting the benefits of globalization. So these countries have been growing anywhere from 6, 7, to 10 or 11 percent per annum. They'll grow a little bit slower, but basically you've got a large part of the world growing pretty quickly. So that is going to help the West, the rich countries, work their way through this thing and provide some growth to the world as a whole, which we can lever off of. So that will be a help. I think the point that is really important for people to understand is that never before has the advanced, industrial, rich world altogether been in the same boat. Usually it's one or two countries, or three or four countries. I guess you could say the 1930s was a little bit like that through policy mistakes. We have never seen anything like this since the 1930s. So that's my take on the economic side of things.

JB: Numerous quantitative easings since 2008 have helped to revive the beleaguered U.S real estate market, job creation remains a challenge, and stock markets have responded well to the ongoing printing binge. With these factors in mind, I'd love to get your take on the dysfunctional American political scene.

Tony Boeckh: At MIT, Jay Forrester's group and people like John Sterman have done a lot of work on the political side of this, as well as on the economic. The point that they make, and they've looked back over a couple of hundred years, is that when you are in the down phase of the long wave, especially when you are down near the bottom with no sense of how long it is going to take

to get into the next up wave, you are in what they characterize as the parochial, nasty, divisive stage. The obvious reason for this is that everybody's got a different idea of what policy should do to turn things around. You can see this most clearly in the U.S. where Republicans want to cut taxes and spending, and the Democrats want to spend and raise taxes. Clearly it is a very divisive, political atmosphere. I think overriding this as well is that, in democracies now, and it is even true in non-democratic countries like China, people look to the government to solve their economic problems. This was not true going into the Depression, the 1930s, all through the nineteenth century and before that. Basically, people felt they had to rely on themselves, on their families, in economic hard times. Now it's, "If I am out of work what's the government going to do about it?" So now there's this tremendous political backlash and political pressure on politicians to, quote, "Do something." And so they thrash around looking for policies that will not necessarily work but will look like they will help people, and how they will appeal to voters and to people who are having a hard time, whereas in fact there isn't a whole lot they can do in this kind of environment.

JB: If the 99 percent doesn't get its entitlements, will we see insurrection?

Tony Boeckh: Absolutely. And that is really the danger. That is the same kind of atmosphere that occurred in the 1930s that gave rise to the Nazi party in Germany and the imperialistic, militaristic party in Japan. And there was a Nazi party in the U.K. and the U.S., and there were Communist parties in the U.K. and the U.S. This is when things get really polarized, but of course that was when there was over 25 percent unemployment over a long period of time. In the U.S. we have only 5.6 percent, in Canada 6.5 percent, or whatever. We're not really in a 1930s environment, except in places like Greece, but you can see the public backlash and the violence is not far below the surface. So that's a really important thing.

Going back to the politicians, there isn't a politician around that's going to stand up and try to get elected on a platform where he says, "Well, we can't do anything about this." Nobody is going to say that. They are going to say, "Well, our policy is to do the following …" They will intervene, and the danger is they can make things worse. For this reason, we're going to be going through a very difficult transition where we're dealing with an economic crisis that becomes a political crisis as well. That's why I characterize the political situation as being out of control. The policy-makers are sort of bystanders trying not to be bystanders. They are trying to advocate policies that will have public appeal.

Canada, fortunately, so far has not been terribly divisive. I think federal government policies have a lot of support. In good part it's because Canada went through its crisis in the early '90s. And I think people really understood that too much government debt is a bad thing. And our people are proud of our banking system; we never had a banking crisis in 2008 and 2009. So there seems to be a lot of support for the governments here and their economic policies. We have a pretty tame situation compared with the rest of the rich world. We don't have a high unemployment rate, we've continued to grow, so things don't look so bad here. We could turn to Europe, where there's a really flawed political structure in the eurozone, in the EU. Countries there are heavily unionized, heavily socialized, and entitlements are deeply entrenched in the system.

Japan has huge government debt to GDP, over 240 percent gross debt in November of 2014. With a population that is declining and aging, I don't know how they are going to get out of their situation. Basically, the U.S. and Canada are much better positioned than Japan and Europe because the demographics are better, with better acceptance of free market ideas. The U.S. has low taxes and low spending so there's lots of room to fix their problem if the politics would ever come around to supporting it. But so far the politics are against it. The U.S. could fix their fiscal problem overnight if they moved to international standards of taxation levels. So you get this interaction between the political and the economic, which is precisely what the Kondratieff-Schumpeter, long-wave model would have predicted. I mean we're in it right now. And I can't emphasize enough, there is no quick fix here.

This will take many, many years to play out. Investors are not used to that idea. Most investors are still looking for instant gratification. Most investors have made a lot of money over the last fifty years. It's been volatile over the last eight or ten years with pretty good returns post 2009. Now there's the point that you made earlier that you can't get a return on your safe liquid assets and so people are saying what do I do with my money? There's a huge problem with pension funds that are underfunded and they can't make a decent return with the low level of interest rates. So people are increasingly forced to take on more risk than they are comfortable with. And that's why people's portfolios are going to be extremely volatile. It drives people crazy especially as they get close to retirement; there's a limit to how much risk people can take. So it is a huge dilemma for investors how to manage their portfolio through this. That's why you've raised this point – the dog bone portfolio. What do you do with your money to survive and hopefully have enough income so you have a decent retirement?

JB: Our mutual friend Dean LeBaron coined the term "dog bone portfolio." He describes the clever dog that gets a good bone and goes out in the back forty and finds a sensible place to dig a hole and then bury that bone. And if that dog gets another precious bone, he goes out and finds another dog bone hole. Dean, in effect, is saying that you should "bury" your precious dog bones in sensible, safe countries and that you must have investments in different asset categories that will keep you safe through this very challenging period.

Tony Boeckh: I think there's a lot of sense in that. I think what is important for a lot of people is to understand what's an appropriate sort of portfolio. Key ingredients are how old is the investor, and what are their obligations, the liabilities that they have, and the other is how much money they have and how much safe income. The person who has $100 million and a good income can look at the world very differently than say somebody who has $500,000 and no income and is retired. They can't afford much risk and are really hurt in not getting a return on safe assets. It's a real problem. It's hard to give advice on what's the right portfolio because you need those factors right up front: a person's age and their other obligations and the size of their assets and income. Those are pretty critical. But I guess everyone has a hypothetical portfolio in mind in terms of age and size.

JB: When you think of safe and secure places for the longer term in this troubled world, where should investors have their dog bone assets?

Dean, for instance, has a dog bone in Switzerland. He's been in Switzerland for many years. You will recall that he has a house in Weesen and he has other Swiss assets. The Swiss are not as friendly to Americans as they were in the past. He believes that you've got to have a dog bone in your own country because one should be smart enough to figure out what is going on in your own country. And you need "walking-around money" in your own country. So he's got a dog bone in the U.S., and he now has a dog bone in Canada because he considers Canada, in a North American context, to be "Switzerland North." Our friend Larry Jeddeloh likes Australia, Norway, and he also likes Canada as global dog bone holes. As Canadians, you and I are naturally proud of our country's stability. As you mention in your book, Canada cleaned up its financial act in the 1990s and seems to be on a more disciplined course.

Tony Boeckh: I think the points that Dean was making are perfectly valid. I think you've got to be looking at places in which you are comfortable keeping some assets. But I think the most important is, you want to keep the bulk of your assets in your own country, if you can trust that country. We're fortunate

in Canada that we can trust our government, and we can trust the environment. We don't have a population that's prone to violence. I think the U.S. is prone to violence, so I'm not sure how things will play out there if the unemployment rate went back to, say, 25 percent. I can picture it being a pretty dangerous country. It's not difficult to imagine politicians getting pushed into doing some things that are pretty anti-wealth. For example, the Americans confiscated gold before they raised the price in 1933. They had extremely stiff penalties for anybody that did not cough up their gold and turn it over to the government. You could not open your safety deposit box without a federal marshal after they froze gold holdings and raised the price. We never had that in Canada. There is a lot of talk these days about wealth and income inequality. If pressure mounts, there will be a lot of pressure to redistribute.

Our banking system is much more secure. So I think Canada really is a very good place to have assets and it is not hard to find good value. I will just run through a few things that I think about in terms of your portfolio.

As I mentioned before, the right sort of portfolio will not be one-size-fits-all. It depends on your wealth position, and your age, and your risk profile, and the obligations you have, such as a sick parent that you are having to finance. That's very important. Secondly, in the big picture, there's no way to know how things will play out over the next ten or fifteen years. That's a very long period of time, and people with money are going to be under pressure. The cover of the September 24, 2011, issue of *The Economist* magazine is one of their classics. They call it the "Hunt for Wealth" and it's these guys riding to hounds and blowing the bugle and the rich people are the fox. Everybody's taking off after the rich people. It's really a very interesting and telling sort of cover. Those with money should keep in mind that analogy of the hounds and the fox. People are going to be coming after you. That's for sure. You can anticipate that.

JB: Dean LeBaron says it's a bit like musical chairs. There are U.S. dollar and other currency chairs and there are bond chairs, gold chairs, and stock market chairs. You've got all these people doing the asset dance while the music is playing. And then, when the music stops, they try to find a chair. But every time the music stops, a chair has been pulled away.

Tony Boeckh: Investors need some growth assets, some survival assets, some liquidity, and I think they need some investment strategies that you can get with some really good managers that give you both a survival and a liquidity component. But overriding all that is, you've got to beware of paper because

there's too much paper in the world, that is, currency, too much money, too much debt. And the basic law of economics is, when you get too much of something, the value is going to get eroded, going to get taken away. So I fundamentally think, for people who do have substantial assets, you want to own real things, and the best is a real business, a business that can survive through a troubled environment and that can generate cash flow and income to investors. The problem with that is, it's going to be very illiquid, so obviously you can't have all your money in business assets. I think farmland is a good business asset. If you think what's going to be around in twenty or thirty or forty years, really high-quality farmland is going to be one of them, assuming global warming doesn't destroy its value. So I think those sort of things are going to survive a lot longer than paper. And I put gold into that category, too. Gold has been around for many thousands of years, and it's held its value. Although it can fall in price over long periods of time, like the 1980s. Then gold went from the price of $850 an ounce to $250 over a twenty-year period. But looking at the very long term, gold is going to do the job. And obviously you need to have some liquidity because emergencies will arise when you need spending money. As you get older you are going to develop health problems, you can't rely on the medical system because, one thing we know for sure, governments are becoming increasingly insolvent all over the world. They're going to cut back on entitlements so medical services are going to deteriorate, and your pension is going to buy less and less as governments cut back. They have no choice.

Also important, what Dean was probably referring to, you can expect to have controls. If things really get out of hand, taxes will increase, especially on wealthy people, on wealth itself, on high incomes, and on assets that can't move. Ultimately, if you tax high incomes, people with high incomes will move, they'll go somewhere else. People can move businesses, but they can't move land. One has to be careful about how much land you have. That's why I think farmland is good because, increasingly, there's going to be pressure on food prices. I think, in a country like Canada, governments would be very careful about excessive taxation on farmland. The farm lobby is very strong. But then, look at Argentina. They've taxed farmers, and they prevent them from exporting. You know there are many threats out there. It's very hard to set yourself up so that you can avoid all these threats. Going back to your dog bone analogy, if you have enough of these dog bones, and if you have enough of them scattered around, they're not all going to get taken away from you.

JB: Now, are there any other countries around the world where you feel really comfortable these days?

Tony Boeckh: I like New Zealand and Australia, but they're far away. Because I live in Canada, I personally wouldn't want to have a lot of assets there. What do you do if things get really bad? How do you make it out there? I think, in Europe, countries outside the eurozone, like Norway and the U.K., are good. I've been a big fan of Norway; they've got lots of energy, which is going to be increasingly important, and they've got a long tradition of democracy and a population that is law-abiding. The U.K. is also a good place, although they've gone through cycles of aggressive taxation of wealthy people. But I don't think there's a big risk of that movement in the U.K. now. Switzerland, of course, is a good place. The more extreme debtor countries are always very instructive. Take Greece and France, for example. The attack on wealth there has just been incredible. Very high taxes, socialist excesses, and corruption. Tax evasion is a national sport in such countries. That puts an even bigger tax burden on those who have difficulty escaping from the net. You want to keep your assets in politically stable, low-tax countries where there is respect for property.

The question of which currencies you should hold keeps coming up all the time. The major world currencies are the yen, the euro, the pound, and the U.S. dollar. I have maintained for years, you should think of themes like which is the best-looking horse in the glue factory. They're all bad currencies. They tend to fluctuate against each other, but none looks very safe for the long run. I don't think there's really a whole lot to choose among them. But I think, over the very long run, you are going to be better off in commodity-based currencies, where the finances are strong, and the countries have a lot of exposure to the high-growth part of the world. Canada obviously fits into that category as do Australia and New Zealand. They export into China and have good finances, but if we do go into a big deflation, and commodity prices get really beaten up over the next few years, the Canadian dollar is not going to do well in that time frame. Note, as of early 2015, it has recently fallen about 20 percent. The U.S. dollar is still a safe haven. Money runs into the U.S. dollar whenever there's a crisis, even though it appears irrational. Money went into the U.S. dollar and U.S. bonds right after the S&P downgraded U.S. sovereign debt.

John Budden's Interview with Ian Gordon

March 2014 and updated April 2015

About Ian Gordon

A globally renowned economic forecaster, author, and speaker, Ian Gordon is founder and chairman of the Longwave Group, which comprises two companies, Longwave Analytics and Longwave Strategies. The former specializes in Gordon's ongoing study, analysis, and investment implications of the long-wave principle originally expounded by Nikolai Kondratieff. With Longwave Strategies, Gordon assists select precious metal companies in financings.

Educated in England, Gordon graduated from the Royal Military Academy, Sandhurst. After a few years serving as a platoon commander in a Scottish regiment, he moved to Canada in 1967 and entered the University of Manitoba's history department. His study of historical trends and subsequent experience with leading brokerage firms ultimately provided the foundation for his own approach to long-wave theory. Gordon has been publishing his Longwave Analyst website since 1998.[3]

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John Budden: I am wondering if we can start with some questions about the long wave and about how you came to your fascination for Nikolai Kondratieff's work.

Ian Gordon: Kondratieff's long cycle was an economic cycle within which I have shown there are investment cycles that start and end during the four long-wave seasons. The most important of these is that gold and the general stock market are always opposite to each other so that when stocks are bullish gold is bearish. That is such an important feature of what I have been able to contribute to the long-wave cycle because it makes it fairly easy to make appropriate investment decisions in each of the long-wave seasons. If you are long gold you are generally long for an entire Kondratieff season. So you should be long gold during the Winter which started effectively in 2000 or 1999 when the Dow/Gold ratio hit its peak. And you should be long gold until Winter ends. Similarly, you should have been long stocks in the Autumn when that started in 1982 – the Dow started its bull market at 777 and topped out in 2000 at 11,750. I call it the official long wave top. You could have been long the whole way through that period and you should have been short gold, or at least not invested in it, from the beginning of Autumn when gold reached

$850 (U.S.) per ounce in mid-January 1989 and bottomed at the end of that season at around $250 (U.S.) in August 1999.

That is something that I try to write about but I don't think people have really caught onto that feature of the long wave. But it is something that I have been able to show and prove fairly conclusively that these different investment themes occur at the beginning and end of the long-wave seasons. For instance, real estate has three consecutive bullish seasons, starting in Spring, Summer and ending at the end of Autumn. In Winter, real estate goes into its bear market; it is usually a terrible bear market because there is usually a deflationary collapse as debt is wrung out of the economy during Winter. Interest rates and commodities experience their respective bull and bear markets, opposite to one another. Spring and Summer are bullish for commodities and bearish for interest rates; Autumn and Winter are the opposite: bullish for interest rates and bearish for commodities. This is because the long wave also contains an inflation/deflation cycle within it. Spring heralds the birth of inflation, and Summer is the season for rising inflation which reaches its peak at the end of Summer, as it did in 1980. In Autumn, inflation enters its disinflationary period and falls into outright deflation during Winter. I wrote an article in November of 2013[4] that showed how these cycles and investment themes interrelate and work during the long-wave seasons.

JB: We've experienced a very strong stock market over the last six years. I say to people that it makes a lot of sense to have a gold component in one's portfolio because it is the natural non-correlated asset that provides a bit of insurance that will hopefully protect some of one's stock market gains and also provide a hedge against evolving competitive devaluations.

Ian Gordon: From my perspective, the gains that we've seen in the stock market are all central bank induced through their ability to create money out of nothing. I know they are supposedly reducing it, but the Federal Reserve has been force-feeding essentially a trillion dollars into the banks, and that's not going out into loans to Main Street; it is going back into speculation. I think the Fed is dead scared of the stock market going through the typical long-wave Winter stock bear market like 1929 to 1932, when the Dow lost 90 percent. That would be the final nail in the coffin of consumer wealth. The Fed will hold it up as best they can. The real peak took place in 2000, which was akin to the 1929 peak or the 1873 peak or the 1837 peak. We then had a down blast from 2000 to 2002, but then Alan Greenspan brought interest rates down from 6 to 1 percent, pushed money back into the banks and reignited the stock market

from October 2002 and October 2007. During that bullish time, interest rates were rising in step with the rising stock market, and by 2007 the federal funds rate had reached about 6 percent – and then of course we had the crash, the failure of, effectively, the U.S. banks, and so on. So again U.S. interest rates, and this time with Bernanke as Chairman of the Federal Reserve Board, were brought down effectively to zero and the banks were again force fed lots of money and that reignited the stock market again in March 2009 to where it is presently [March 2014].

But this time, interest rates haven't been allowed to rise in step with rising stock prices because the Federal Reserve has kept rates effectively at zero all the way through. So when the next shoe drops, when the stock market enters its true Winter bear market, they don't really have any further ammunition to withstand it. I am pretty sure that the shoe is almost due to drop. I really think we are on the last legs of this super-charged bull market.

JB: Now you have a whole lot of equity investors who are patting themselves on the back for the wrong reasons. That is, the equity markets are benefiting from all the stimulus and because of competitive devaluations rather than fundamentally sound stock values.

Ian Gordon: I think the simplest way to measure the relationship between stock prices and the gold price is the Dow/Gold ratio. You can see how that ratio effectively reached its peak in July 1999 when it took the value of about forty-four ounces of gold to buy a unit of the Dow Jones Industrial Average. And that peak had come from a one-to-one relationship in 1980 when it took only one ounce of gold to buy one unit of the Dow Jones Industrial Average. The Dow/Gold ratio is now down to about fourteen-to-one. You would have been far better off to have remained in gold anyway during that period than to have been invested in stocks because gold was outperforming the general stock market.

Nevertheless, since the most recent gold price peak in 2011, things have been very difficult for gold investors. But eventually, as the general stock market prices cave in, gold will once again become the choice investment as it was after 1929, and the Dow/Gold ratio will once gain reach extreme lows. I am forecasting a ratio of .25 to 1, which will be significantly lower than the previous lows of 1 to 1.

JB: So for reality, you reference the Dow/Gold ratio, because we're living in this strange world of money printing. When you and I last talked, you mentioned your old friend, Teddy Butler-Henderson.

Ian Gordon: Teddy Butler-Henderson? I spoke at a function in 2002 that he organized for the Halkin Group on the very day that he died. It was tragic. But I guess you are going to hearken back to the story about his meeting with Alan Greenspan before Mr. Greenspan became the Federal Reserve Chairman. Alan Greenspan had told Teddy that he would like to be the Federal Reserve Chairman during a Kondratieff Winter because he felt that he would be able to withstand the fury of the Kondratieff Winter simply by fiscal and monetary means. When Teddy told me that story, interestingly enough, the Federal Reserve had been effectively challenging the Winter since 2000.

Incidentally, during that discussion between Mr. Greenspan and Teddy Butler-Henderson, Mr. Greenspan said that, if he failed, the outcome would make the 1930s look like a Sunday school picnic. I am betting that his successors at the Fed will fail and the outcome is likely to be devastating.

But the other thing I think you have to understand, and a lot of people have a real difficulty in understanding this, is that we're talking about the long-wave cycle. Those cycles are natural phenomena. Most people don't think in those terms. We've been taught that things improve and that we have linear progression and that cycles don't exist. But if you call it a cycle, it is a natural phenomenon. The important thing about it is you can offset, for a time, the natural phenomena of financial, economic, and investment cycles simply because they are operated by money. If you can create enough money you can prolong the good part of the cycle, but eventually the cycle will revert back to the norm. All those attempts to control the bad part of the cycle will mean that when it reverses, the outcome will be far more damaging than if the cycle had just functioned naturally.

I am convinced of this. We will revert back to the Winter of the cycle, and because there's been so much money pumped into the system to try to keep the good part of the cycle going, i.e., keeping the Autumn period of the cycle going, when the cycle does revert, it's going to be far worse than it might have been had it been allowed to follow its natural progression.

JB: It's interesting that you mention the story about Teddy Butler-Henderson and Alan Greenspan because I also heard a similar account from my friend Larry Jeddeloh, editor of *The Institutional Strategist*. Legend has it that Mr. Greenspan may have actually made reference to King Canute "turning back the tides," and he felt that he would be able to do just that as chairman of the Federal Reserve Board. I guess when you take a look at what's happened, the Fed has to a certain extent succeeded, but as you have just stated, this is not going to end well.

Ian Gordon: No. And I think the ending, as I have said before, is imminent. If we consider that the stock market peaked between January and March 2000, with the Dow at 11,750 and then we went into a bear market for two years, followed by a bull market for six years. Then another bear market for two [2007–2009]. Now we've been in a bull market for five. So we've got that progression. Two down, five up, two down, six up. My feeling is we're ending that progression, and the next place to go is into the bear market.

JB: The quadrillion-dollar question is when does this Winter cycle end. Do you have any thoughts on that?

Ian Gordon: In my November 2013 piece[5] I showed the interrelationship between the secular cycles and full cycles, each with bullish and bearish phases, which will continue, finally ending with a gold bull market around 2022.

JB: If you are the clever investment dog who is hiding dog bones, what sort of dog bones, other than gold, should be in a portfolio, and where would you hide them?

Ian Gordon: From my perspective, and from my work in the long wave, I know that Winter is the time to be 100 percent invested in gold and 100 percent bearish on the stock market, even though the Federal Reserve was able to delay the ravages of Winter in which, as we just discussed, the stock market will eventually revert to the norm. So I don't want to be invested in stocks. From my own perspective, I am 100 percent invested in precious metals and principally in gold. A lot of people are more bullish on silver than on gold. I don't see silver as a primary monetary metal so I am much more bullish on gold.

I mean, countries like China and Russia are acquiring copious amounts of gold. They are not purchasing silver to the same extent. And we know that in 1929, silver was at seventy-five cents and it dropped in 1933 down to twenty-five cents. The price of gold of course during the same period was fixed – people say, well, if the price of gold hadn't been fixed it would have dropped, too – but I think that is totally wrong because the desire to own gold after 1929, when the U.S. banking system started to collapse, was tremendous. Everybody was taking their dollars and converting them into physical gold. Foreigners were doing the same thing. The American Treasury was actually running out of gold. And we can also see by the chart of Homestake Mining during the crash between 1929 and 1932 that Homestake took off and appreciated by 600 percent, even without any rise in the gold price. There was just a tremendous urge to own gold as the financial system collapsed in the U.S.

That's really where I put my assets, principally gold. I do have some silver.

And I'm also talking about gold stocks. I tend to focus on the junior sphere rather than the seniors because I think that's where the leverage is to the rising gold price. So that's where my assets are. At the onset of every long-wave Winter, there has been a currency reset. For example, in the previous long-wave Winter between 1931 and 1933, the entire world monetary system based on gold collapsed. Now, with Russia and China building their gold stocks and world paper currencies close to collapse, it is likely that this long-wave Winter will set the stage for a new world currency system based on gold. Where do you hide them? Well, I don't tell anybody! So I'm not telling you.

JB: That's very sensible! Now, Ian, I am interested in hearing your thoughts on real estate. From my perspective, and maybe it is a function of my age, real estate is to live in and enjoy, but one should be careful about having too much real estate as an investment vehicle.

Ian Gordon: I'm very bearish on real estate. For a start, the economy, the Winter economy, is in a Depression, which has been masked by excessive money printing. That's what really happens in the long-wave Winter. We go into a Depression as the debt is effectively wrung out of the system, and a lot of that debt is wrung out through bankruptcies and collapses. This hasn't been allowed to happen, but it will. We are starting to see this in China. The debt bubble has begun to burst there, where we have seen big steel companies and real estate companies going into bankruptcy. This underlying trend started in the United States in 2007 with investment banks Bear Stearns, Lehman, and Merrill Lynch on the ropes. Then we saw it with the automobile manufacturers, General Motors and Chrysler. Eventually, the whole system is going to collapse, and we are going to go into a massive Depression. So real estate is not where you want to be. There's nothing wrong with owning your own home, as my wife and I do here in British Columbia. But I would never be an investor in real estate in a long-wave Winter. It's probably one of the worst places to be.

JB: One of my former partners used to say that real estate can turn into "a dead horse that eats." The demographics are changing, you've now got an aging population, people who are very proud and don't want to admit that stealth inflation is actually making their real estate very expensive to hold. In Ottawa, where I live, you are seeing large, high-maintenance residential properties come on the market as a consequence of this phenomenon. I don't know whether you've noticed this trend in the Vancouver area yet, but it's certainly apparent in Ottawa.

Ian Gordon: There's a tremendous amount of speculation in Vancouver real estate. We've had a sort of recovery in the United States, but that recovery has come through big hedge funds buying up slews of houses and renting them out. It's not the Mom and Pops who are buying. There are a bunch of Canadians buying because the Canadian market hasn't started its collapse yet, but when it does the whole thing is going to deteriorate rapidly and I truly believe that this time around the central banks are going to be powerless to withstand the onslaught given that interest rates are down at zero. They don't have that mechanism whereby they can lower interest rates further because they are already at zero.

Meanwhile, the Federal Reserve has force-fed trillions of dollars into the U.S. banking system. When this monetary phenomena starts to collapse, and the stock market collapses along with it, $18 trillion of people's wealth will dissolve. So, when you start to take that sort of value down in a crash scenario, you are draining so much wealth out of the system, so fast, that you are not going to be able to hold it back. I am absolutely convinced of that. Things are going to get pretty ugly.

JB: Going into 2007, people thought that they had a lot of extra wealth in their back pocket from their real estate. And now they're feeling that their stock market holdings in the other back pocket represent additional wealth. I guess where I'd want to go now is to Eric Sprott's estimates that there could be about a quadrillion dollars in derivatives outstanding. If you take the air out of that bubble then we are in for some real trouble.

Ian Gordon: I agree one hundred percent with that. Because we're on a paper money system – I just wrote a piece which has very good reviews called "The Death of Paper Money"[6] – central banks have the power to create money out of nothing. This is why you have speculation running rampant everywhere, and particularly in these derivatives, which are so-called hedges, and this is what I think is so funny because for every one person long and there is one person short in a derivative transaction. When that market caves in, when something happens, a major bank can fail – just like the AIG collapse in 2008 – the whole thing can blow up.

We are in a very, very difficult kind of a period where the powers-that-be no longer have the wherewithal to contain the next crisis. But when the collapse occurs, it's going to be frightening. It's not going to be just a little shudder. The whole system will roll over and die.

JB: Ian, you and I met at James Capel in about 1988, 1989, and then we both went on to do other things. Tell me a bit about your background and how you developed your fascination for long-wave theory and gold. I believe your specialty is history, so it's all quite appropriate.

Ian Gordon: I was actually born in India. During the war my father was an army officer in India and the colonel of an Indian regiment. After the war, when India got its independence, we returned to the U.K. so my education was in the U.K., and I followed my father and my two older brothers into the army. I went to the British military academy, Sandhurst, and was a young platoon commander in a Scottish regiment. I met a Canadian girl while I was there, and we decided to get married. But she wanted to live back in Canada, which meant that if we were going to get married I'd have to emigrate to Canada, which I did in 1967. Sandhurst doesn't give you a degree, so when I got to Canada I became aware that just about everybody seemed to have a degree so I decided I'd better go and get one. My specialty, the area I really enjoyed, was history. So I got a B.A. in history from the University of Manitoba.

My initial jobs in Canada were in human resources management, but I was fascinated by the investment business and set out to understand it. I was investing my money and reading everything I could about investing, particularly technical analysis. I was much more geared to technical rather than fundamental analysis because you are really tracing a history of prices in technical analysis. I was also fascinated by cycles. I started to subscribe, I think it was in 1981, to Donald Hoppe and who was writing "The Kondratieff Wave Analyst,"[7] which ceased publication in 1993. But I loved the newsletter. It was twelve pages every month, and it provided a great history that tried to marry what had happened in the past with the present and the future. I kept every copy that I received, I still have every copy that I received, and read them religiously.

I got into the management side of the brokerage industry and founded my own firm with some partners in 1998 and rebuilt my own client base. I started to write my own piece called *The Longwave Analyst*, which was based on Donald Hoppe's work. Very quickly, I began to realize that we were repeating the big bull market of the '20s.

Fascinated by that, I called John Carter at Topline Investment Graphics, who has done all my charts since then, and I said, "Can you draw a long-wave chart showing stock prices going back to 1789, including interest rates?" So John developed that Kondratieff chart, which I think is a masterpiece because

it provides a tremendous amount of stock and commodity prices, the gold price, which is best reflected by the price of Homestake Mining, since the price of gold was fixed until 1971, and of course interest rates. When I got that chart, it became apparent to me that these bull wave markets always occur in the Autumn of the long-wave season. And when they peak, you then go into the long-wave Winter, the payback period in the cycle, which results in a deflationary depression. It was very easy for me, from the visual perspective outlined by that chart, to see that we were very close to the end of the big bull stock market that had started in 1982 and that once that bull market ended, gold would be the place to put your money as it had been after 1929.

JB: Given that we've had this tremendous correction in the gold price from 2011 to 2014, particularly in the juniors where you have been very active, do you still see value there? That is – pockets of really good value?

Ian Gordon: One of my favourites is Barkerville Gold Mines. It's a 5-million-ounce, 43-101 resource, with a potential of up to 27 million ounces. And you are effectively only paying $12 an ounce for every ounce of gold in the ground. It will ultimately be an open pit mine, and it will be very high grade for an open pit mine. The other advantage of a company like Barkerville is that it owns its own mill capable of processing 900 tonnes a day. Barkerville is not only permitted for production from that mill site and the QR mine, but also there is small scale permitting on its Bonanza Ledge – a mine which is on one of the mountains on its property. These are not mountains per se; they are grassy tree top hills with good road access. Barkerville should be producing gold from the Bonanza Ledge soon. So you've got a junior miner with 5 million ounces in the ground and growing. In my opinion, it can grow its production quite substantially and throw off good cash flow. I think that Barkerville Gold Mines represents good gold value in the junior sector.

JB: Ian, thank you, that sounds like a pretty good golden dog bone.

Ian Gordon: I like dog bones like Barkerville, with gold in the ground, in a safe jurisdiction.

Note: Since this interview, Ian has been elected to the Board of Directors of Barkerville Gold Mines.

John Budden's Interview with Larry Jeddeloh
October 2013

About Larry Jeddeloh

Larry Jeddeloh is editor of the *Institutional Strategist* and Managing Director and Chief Investment Officer of TIS Group in Minneapolis, Minnesota. He is an experienced investment management professional with, in 2015, thirty-seven years in the business. Larry founded TIS Group in 1995.

Previously, Larry held the position of chief investment officer of Resource Capital Advisers, with responsibilities for $1 billion in assets. Prior to joining Resource, he spent two years in Switzerland with the Union Bank of Switzerland in Zürich, where he was a vice-director and the chief investment strategist in the Institutional Global Asset Management Group. For seven years in the 1980s, he was director of equity research at the Leuthold Group, a well-known institutional research firm in Minneapolis.

He was also a partner of Leuthold and Anderson Investment Management Counseling and Weeden & Company, an institutional brokerage firm.

Larry earned his Bachelor of Science in Finance and a Master's of Business Administration degree from the University of St. Thomas, St. Paul, Minnesota. He has taught courses in investments and corporate finance at the University of Minnesota, Northwestern College, and Augsburg College.

His work has been noted and used in various publications such as the *Wall Street Journal, Newsweek, Forbes, Money Magazine, Your Money, U.S. News & World Report, Barron's*, and *Global Finance*.[8]

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John Budden: Larry, you have spent a good part of your life wandering around the world meeting with your very clever investing friends. What is your outlook for the next fifteen years, and where are we in this Kondratieff Winter?

Larry Jeddeloh: I think we are halfway through the Kondratieff Winter in Western developed markets. Japan is approaching the end of their Kondratieff Winter because they started their Winter about 1990. They have an opportunity, I think, in Japan, to emerge now, but my guess is, because of the dislocation of government in that country, they will not emerge yet. It will take another five years or so. They will probably have to have some kind of financial crisis in Japan to get them to change their economic policy and, probably most importantly for the Bank of Japan to change their monetary policy before they can

emerge in a new period of growth. Interestingly, John, I think they may give us a head's up on how Europe and the U.S. emerge from our Kondratieff periods. Because I think what's happening in Japan, although it has been kind of a slow-motion event, it's going to look very much like how the Western countries – now I'm speaking only about the developed countries – emerge. Now if you look at Japan, you'll find that, over time – and this is a culture that has very much revered the Emperor, revered government, revered the military – the country has seen two decades of increased volatility. They've changed governments – it almost looks like the Italians – numerous times. There's declining and very low confidence in the government now on the part of the average Japanese citizen. Companies are in the ascendant in terms of planning, and executing, and driving the Japanese economy, and that's what I think is also going to happen in the U.S. and Europe in the second half of this Kondratieff cycle, which has been going on now for around ten years, ten or eleven years, because I think, here in the U.S. and Europe, it started in 2000, not 1990, like it did in Japan. What's going to happen is that governments are going to be pretty much discredited. They're going to be unable, they have been unable, to fix the unemployment problems. They are massively in debt; they have not been able to generate new technologies or new growth patterns. They've pretty much run the course out in terms of globalization. You know, when you're pretty much down to talking about free trade pacts with very small countries like Panama and Colombia, you know you are at the end of that whole cycle.

And so, to circle back to Japan now, I think that's the country we want to watch because in the next five years there's going to be an implosion on the government side. And it's going to be the corporate sector – the Sonys, the Hitachis, the Toyotas, of that culture – that are actually going to lead the way out. This is going to be the beginning of a long, ten- to fifteen-year phase of something we've seen before in world history. And that is, we're going to see "corporates" basically running government. There's another word for that, it's called "corporate fascism." In past periods, this has not always been a great benefit to liberty or freedom of peoples, but it is very good for the companies themselves.

This is not necessarily deflationary or inflationary. In fact, in the past, this is usually the point at which you do get changes in policy. So you get these early stirrings away from a transition, either into inflation or deflation, or vice versa. In Japan's case, then, it would be a transition away from years of deflation to the beginnings of inflation. It doesn't happen overnight, but I think they're coming to the end of this long deflationary period and so their interest rates

are extremely low, I think, relative to where they will be five years from now in Japan. And they will lead the way out. The rates are also extremely low in the Western democracies, and they will be higher, but it may take more time than five years. And so, again, I would watch Japan here very carefully because they, again I think, lead. In the U.S. and Europe, we've already been through what I'd call the first two acts within the first part of the Kondratieff Winter. We've been through two reflation cycles. We've had one big round of rate cuts due to the 9/11 crisis, and we had a second round late in the last decade as a result of the housing crisis. We boomed credit – I'm speaking here more of the U.S. than Europe – but we boomed credit first to the housing sector in response to the 2002 to 2003 recession, and created the bubble that popped in 2007 to 2008. And now we're creating another boom in credit, but this time it is going on the government balance sheets. That's Act II. We've also run up huge deficits in the last ten years to try and reflate in the States. Obviously, the first time it was based, predicated on reflating the economy after 9/11, and the second time, after the financial crisis in 2008. We did tax cuts, the Bush tax cuts, which is the fourth step in the reflation cycle, in 2003, and then renewed them last year, and the final step was we spent ten years devaluing the dollar. So I would say Acts I, II, and III are behind us now and – I'm trying to think of the word they use at intermission in these long movies like *Ben Hur* – "intermezzo," I think it is in Italian – we're at the intermission now, I believe. The next phase is going to be characterized by a recognition that this hasn't worked. We're simply slowing the economies' rate of descent and rate of change.

If the U.S. and the European authorities had let the system cleanse itself, we'd be in an era of tremendous invention and innovation. That's when new inventions are most likely to occur. And you get most innovation in periods of extreme economic stress, and that hasn't been allowed to happen. That's also what cleanses the real estate market, and that hasn't been allowed to happen, so these are all things that are still coming now, in the next ten years, in the States. I think we are going to see a huge burst in new technologies and new inventions as the economy fails to recover. We will find the real estate bottom, but it may take a very long time. We're going to see, I think, a complete change in work ethic, especially in the U.S., but it may happen first in Europe because, as you go through these long periods of unemployment, people are willing to work for less wages and less benefits. They are willing to work longer hours and to be more flexible. They retrain. Then they begin to move into new parts of the economy. I think another feature of the next ten years is, we're going to see people, who today think it is just fine to go on the dole for one or two years

and not work and live off the government, essentially find themselves thrown off the government dole and forced to re-educate and retrain and begin to work again.

In a socio-economic sense, as you go through this ten-year period, the second half of the Kondratieff Winter in the Western countries, investors are going to become more and more conservative. You are already seeing this, to some extent, in terms of stock fund outflows. You're also going to see asset allocations become less equity oriented. You're going to see a good deal of – maybe befuddlement is the wrong word – but there will be great discussions about what to do in light of very low interest rates. And then, when interest rates finally begin to rise, and bonds begin to lose money because the coupons are so low, then the question will be, if we're not using stocks, and we're not using bonds, what is it we can allocate money to? What is the conservative allocation for a population group in both Europe and the U.S., who by that time will be much older? The leading edge of the baby boom would be about seventy-one years old. I don't think they'd be owning large allocations in small cap equities and international funds, or a lot of the asset classes and fund styles that are so popular. They're going to be looking for income, and they are going to be looking for ways to preserve their capital, and looking for ways to preserve their purchasing power. So, I think the whole business and nature and focus of the capital markets are going to shift at that point.

JB: Now I want to ask you about the wild cards. You have been very accurate in predicting events in the Middle East, and we are dealing with another major economic wild card, which is the confluence of inflationary and deflationary forces. And finally deteriorating economics are breeding dangerous politics – reminding one of Weimar Germany in the 1920s, and the evolution of the Nazi party.

Larry Jeddeloh: That's also one of the features of many Kondratieff Winters. You have a history of an outbreak of wars. Those wars are not often, but sometimes, fought in order to regenerate economies, to fight over resources, as they were in the 1930s when Japan invaded China and then much of the rest of East Asia. The whole plan was dubbed the Greater East Asia Co-Prosperity Sphere. And the idea was, Japan needed resources to begin to grow itself. So that was the moniker they put over the whole program. This time, I think it's the Middle East that will be the focus of most of the wars that we are going to see. Actually there will be two areas – one will be the Middle East, physically. The other one will be cyber. We can talk about cyber in a second. But the two great resources that will be fought over are oil and the other is information.

And on the oil side, what we've just been through in the last forty or fifty years, well, even longer than that, if you look at a map of the Middle East you can go back to the post–World War I conference in Cairo that Churchill ran. He gathered a bunch of British experts and, I believe, one tribal chief from Saudi Arabia, who drew the map of the Middle East with almost no regard for tribal or language affiliations. Countries like Jordan were carved up creating boundaries that have been in existence for eighty to ninety years. The governance of those countries with the artificial boundaries has pretty much resided with clans who ascended to the monarchy or to political figures who were propped up by Western powers.

That is all going to change, in my view. I do not believe there will be one royal family or dictator who currently sits on the throne of any Middle Eastern government from Afghanistan, to Iran, to Iraq, to Syria, to Jordan, to Lebanon, to Egypt, to Saudi, to Yemen, to Oman, who will still be there in ten years. They will all be gone, and a different set of people will be there instead whose allegiances and alliances will not run necessarily in the same way that they did the last forty years. I don't think they'll necessarily be as pro-American or as pro-Western. I think they will be much more aligned with China. When the U.S. finally does leave Afghanistan – and we will probably have to leave because of the financial cost of remaining there – I think you will see the Chinese move in, and I think you will also see the Chinese move into Pakistan and become much more friendly with those two countries. They have been looking for a port to the Indian Ocean for many years and so that will also be one of the outcomes. If you think about it, everything I have been describing just creates a tremendous amount of turbulence and potential risk for the supply of oil that's coming out of that region. I've argued before that there would be a supply disruption due to a war at some point. That has not come to pass yet. In a number of Middle Eastern countries it may not take an out-and-out war to cause a stoppage of oil supplies, but merely enough contagion in terms of changes in governments, changes in the protection they've enjoyed from the U.S. over the years in terms of having the Seventh Fleet in the Straits of Hormuz. I think that if and when ex-pats begin streaming out of that region then production will begin to fall dramatically. This could be one of the great surprises unfolding during the second half of the Kondratieff Winter – contrary to the current bearish scenario, we could experience an enormous spike in the price of oil, that could take it to in excess of $200 U.S. a barrel, virtually overnight.

The other resource that's going to become very valuable is information.

One of the things, actually two of the things, that I've noted recently – and this is not a near-term view, this is going to last now for the next ten, fifteen years – is the Pentagon has determined that the internet is now a domain for war. They are looking at the internet as a battlefield. That is a completely different way of looking at the internet going forward than it has been in the last ten years when it was looked at more as a commercial venture, then it became a social media avenue and a transmission mechanism for corporates in terms of communications. This brings out a whole new element, which, to me, suggests, that, in the next ten years, information is going to be more tightly controlled on the internet. I can even see tollbooths being set up on the internet so that if you want to pass from one side to another side or access information you'll have to pay for it. Since the internet has become so valuable, we may have – I'll call it – Internet One, the internet we have had in the first half of the cycle essentially shut down. Then we'll have its replacement, Internet Two, controlled more by the military and governments than Internet One was, with the express purpose of controlling and monitoring information, but also pricing information.

This is the way business is going to be conducted in the next ten years. You can't fly people around at $225-a-barrel oil. They are going to have to find ways of doing business in a more cost-efficient manner, and I think the internet will be the avenue. So the price structure on the internet will be like a tollbooth or a gas pump. There is going to be a price and it's going to make business much more efficient in some ways, but it is also going to start to put a price into the products that are produced, marketed, and sent over the internet that isn't there at this point.

It is going to change the way people communicate as well, because if you start charging people to send e-mails, and charging people to access a social media site, that's going to change their behaviour. That's also part of the second half of any Kondratieff Winter, these new inventions – I just gave you an example: an Internet Two that starts pricing access to the internet, pricing its usage; I actually think this is quite exciting – new inventions courtesy of people who will innovate to find ways around that. And they will be looking for technologies that can replicate what we have now, but somehow bypass the internet, and I'm betting somebody will find that way of doing it.

JB: Dean LeBaron says that China's playing chess while the United States is playing checkers. As we are talking about long-term game plans … China not only has become the banker to the U.S. and others but is also gaining a major

foothold in Europe, Africa, and the Middle East. How do you see China's role in Kondratieff Winter?

Larry Jeddeloh: I think China does have a long-term plan. Almost alone among the top ten nations, they do have a plan. And I think that's an enormous advantage for them. If you look at what's happening with the U.S. – for the last five years we've been unable even to get a budget from a Congress that's legally obligated to produce a budget. It's just radically different from the way the Chinese operate. I think they will by the end of this cycle have a credit crisis at some point. They have an inflation problem; they have a housing problem; they have social unrest problems; they have problems.

JB: Can China weather the Kondratieff Cycle?

Larry Jeddeloh: No. Not at all. And we're their customers. The West is their main customer right now. As our demand for their products diminishes, or at least slows, they're going to have to find other outlets, and I think this is actually one good way of thinking about how wars can occur. They need resources, and they need markets. Right now everybody knows the China resource story and how they've been buying commodities like aluminum, and now they are buying food, and next week they may be buying soybeans. What we don't see very much of is the scale of the markets that they need to access in order to sell their goods, the goods they are producing. And there aren't a lot of economic blocks like that that are able to absorb the production that they have available, so one of the things that I think that you'll see in the next ten years is their investment in Europe will increase quite dramatically for the simple reason that Europe has three hundred to four hundred million people with reasonably high income levels, and they can buy Chinese goods. Increasingly they will buy Chinese goods.

But I also think that in their planning they have to think about how they access, if you just look at the demographics, how they access several other key markets, key economies that are already quite large, that are growing their per capita GDPs rapidly and could also absorb quite a lot of Chinese goods. I think it has got to be India, they have to be thinking about how to access Brazil, they have to be thinking about how to access Indonesia, and Africa. They've been big investors in Africa on the resource side, but I also think that Africa may be one of their bigger opportunities, not just in terms of being able to put capital in, but also to take trading relationships and build them up as income levels build up in Africa. Right now, there are some Western companies there but, I think, that's almost like the Wild West in terms of building up relationships in

places like Nigeria or across northern Africa. In fact, they'd already started in North Africa. The Chinese, I understand, were quite large investors in Libya. So I think that's going to be very interesting next ten years, just to look at how China doesn't just develop their reliance on resource bases, but how they go forward finding customers for their goods.

JB: Are the Chinese really engaged in a form of cyber-economic warfare that will embed their ideology in people's brains around the world? And off to the side, what is happening with regard to the build-up of their traditional military?

Larry Jeddeloh: I think that's absolutely right. Somewhere I read a number regarding the size of their … let's call it their government cyber monitoring unit. These are the people who read incoming and outgoing e-mails and look at websites and basically control internet traffic in China. It is an enormous number and was estimated by the BBC, in October 2013, that China employed two million microblogs to monitor state media Surprisingly, it was the only number that I've ever seen for any government. I don't know how many the U.K. or the U.S. employ in the field, but obviously internet surveillance is big business these days. So I think the first half of your question is absolutely right.

JB: We now know that the U.S. National Security Agency is countering Chinese cyber-monitoring efforts. Does that neutralize criticism of the Chinese and in effect allow them a free hand?

Larry Jeddeloh: Yes, but I would be shocked if the U.S. has as many people working on cyber monitoring as the Chinese do. I have no idea where U.S. cyber monitoring operations are taking place, but, as I said, information flow is going to be one of the two great resources of the next ten years. The media seem to focus on how China is ten years behind the U.S. militarily in terms of aircraft carriers, or submarines, and weaponry, and so forth. Nobody ever talks about what I have just described here, and that is, in terms of controlling information flow, and being able to analyse information, and get it quickly – but the control is the big thing. In that respect, they might well be way ahead of us.

JB: Is this Kondratieff Winter's cyber version of the Cold War, and are the Chinese beating the pants off us?

Larry Jeddeloh: Funnily enough, I think it's companies that will drive this – the catch-up phase for the West, because we are the ones who will be the immediate losers in this battle for information, and our governments, hopefully, are aware of this frightening reality. The West is going to be outmanoeuvred

by Chinese companies who are acting in concert with the Chinese government, and Chinese companies will be able to outbid Western companies for government contracts. They'll know what the other side is bidding before the bid ever gets there. They'll just know. They'll know everything, and this will happen so many times before Western companies figure out that they are being outgunned.

JB: Unlike the 1970s, in which we experienced almost pure inflation, in this Kondratieff Winter a confluence of inflationary and deflationary forces is allowing over-indebted governments around the world to artificially justify and control near-zero interest rates.

Larry Jeddeloh: I think this may be very simple, but I think that both central banks, the ECB and the Fed, are hostages to their history. The ECB is hostage to what went on in Europe in the 1920s, the hyperinflation. The Germans, in particular, because they were at ground zero, are never, for at least another generation, going to allow that to happen again, which is why the Bundesbank and now the ECB conduct monetary policy in the way that they do. Everything is devoted to making sure that inflation stays under control. When they start raising interest rates, as they just did in Europe with CPI at 2.5 percent, you almost have to laugh. On the other hand, the U.S. had a deflationary depression in the 1930s, and you can read the opposite response in Bernanke's 2002 paper. It was all about how to avoid another deflation. As a result, we've had, well, we all know what we've had, we've had the bubbles, we've had the money printing, we've had the budget deficits that are skyrocketing, we've had articles appearing in the popular press, now, that are boldly stating that now we're $14 trillion in debt, that there's no way to pay it back.

You know, if you change it to Germany, you probably saw the same kind of articles in the 1920s in Germany! I mean, it's exactly the same thing. So my guess is that what will happen in the U.S. is that we will continue to adopt a policy, a monetary policy that fights deflation. And they'll overshoot it, as central banks often do. When the change comes, it will be very sudden. It will probably be rooted in a change in perception, by the man in the street, that the dollars he's holding are not worth holding and that they should be exchanged for hard goods, for food, for gas, for shelter, for anything else that he needs. And when it happens, history tells us it happens relatively quickly, in just a few months' time frame. And then they start taking their money out of the banks and out of – well at that time, in the '20s, in Germany, it was out the banks – and this time it would be out of the money market funds, and out of

short-term securities, and again, out of the banks, and they'll start buying hard assets again. I think that day is coming in the U.S., and my guess is that will mark the beginning of the end of the Kondratieff Winter for America.

JB: And to reference Hemingway's quote on bankruptcy, "How did you go bankrupt?" "Two ways. Gradually, then suddenly."

Larry Jeddeloh: I'm not sure what fund firm he worked for, but that sounds to me like a pretty good analysis.

JB: This book is called *The Dog Bone Portfolio*, so, in fairly simple terms, assuming that you are putting away dog bones, which represent clumps of wealth that you would like to see maintain purchasing power through Kondratieff Winter, where would you put the dog bones, and what sort of dog bones or asset groupings would you have?

Larry Jeddeloh: That's a fabulous question. I would divide that decision into a geographic and an asset class discussion. Geographically, one of the things I have been thinking about a lot is, if you look at a globe and just ask yourself this question – how many wars are there below the equator? – you really can't come up with one. Now, I know most of the world's land mass is above the equator, not below the equator. But if you think about the relative tranquility and safety of the southern hemisphere, it's almost all out of proportion with what's going on in the northern hemisphere. You have Australia, and you have much of South America, and you have part of Africa, and you have New Zealand, and that's about it. I think that, geographically, one of the dog bones ought to be placed, at least one, in the southern hemisphere. Probably in South America. At least one in South America. Also, I tend to favour Singapore, just a little bit, John, even though it's about twenty miles north of the equator. I think, Singapore would be one of the places I would put a dog bone.

I like small places – that's a second point – I like small out-of-the-way places that people don't care too much about. I think, over time, people will care quite a lot about Singapore, but at the moment, it's kind of a small place, out of the way, and you hear a lot of commentary about how it's only got five million people, and it's hot there all the time, and nobody can live there for a long time. I think that's all good, it's very, very good.

The same thing would be true of my other southern hemisphere dog bone location, maybe somewhere like a Chile, where it's just so far away from everything else that you would have some physical security or value in putting one of the dog bones there. I think that would be a second location.

A third location, I think, would actually be Canada, in terms of the

northern hemisphere. There are not a lot of physical places that I think are safe. Now, Canada is not a small place geographically, but it is smaller in terms of population, and it does not have a significant war-making capacity, which I also like. It has – I think everybody knows this – it has everything we all need, water and resources, and oil and gas, and generally people like Canadians, so Canada that would be another place, I think.

I also like neutral countries, and while I thought very hard about Switzerland, I think another neutral country that's very much out of the way, in fact it's way out of the way, and it's very wealthy, and I don't run into people who say they hate Norwegians, in fact they are looked on as being pretty good world citizens – it would be good to put a dog bone in Norway.

Which brings me to the third point, and that is I am looking for places to put a dog bone that are fiscally very, very sound. In Norway, for instance, they have four million people and a near trillion-dollar sovereign wealth fund that is still growing. I think putting a dog bone in Norway you are buying something like a gold-plated investment.

So that would be my general idea, would be to put one or two bones in the southern hemisphere, probably Singapore, one, maybe Chile, another. Put another two in the north, Canada and Norway. Put them in places that tend to be out of the way, small, world friendly, and then I think you start looking at the assets that you want to put them in. The offerings I think there are pretty clear. In general terms, over the next ten years, I believe there will be two assets that will have big moves. One will be food prices. I don't have the best way to execute this yet, and I'm not sure I can do it in Norway, or Chile, or Singapore, but maybe I can in Canada, where the ownership of some kind of land or farm production capability, I think, is probably going to be a very good investment.

The other general idea revolves around this whole issue of asset classes and what is money. That is, if you look at the other Kondratieff cycles, that almost always is the principal issue in the second half of the cycle, of what is it that constitutes money? Is it a Deutsche mark that goes from 1 to 1 to 5,000,000 to 1, and you are carrying wheelbarrows down to the bakery to get a loaf of bread? Or is it gold? Or is it silver? Or is it barter? Or is it something else? I would think that, in each of these three or four places, I would put money aside, for instance, in Norwegian kroner. I think owning a Norwegian kroner is going to be a very good option. I think owning a Singapore dollar is going to be a very good option for the next ten years. My view of gold is, I think, it is going anywhere from $2,000 to $12,000 an ounce. It's an awfully wide range, it's just that I think that whether we have an inflation or a deflation it's going

to go up from here, and it is going to be because it re-emerges as a form of money. It's not a commodity. Commodities don't go up twelve years in a row. Money can. And so, this is money. I think the proof that it is money – I just asked this the other day: I said, if you put the central bank chief from China up in front of a committee and asked him if gold is money, what would he say? Well, he would say no. And you could do the same thing with the central bank chief in India, or any number of these countries that have been using gold as a currency for years and years and years. I think the currency question is actually very crucial in this. I don't think I would own any of the developed market currencies. I think I would own currencies in small out-of-the-way places and I would own some gold and some silver.

Going back to where I started, with the world moving towards a global corporatocracy in terms of governance and influence, I think, there will be a few multinational companies that will literally become governments unto themselves. You can own those shares no matter where you happen to physically locate. I think, in ten years, they may have their own cities; they'll be able to negotiate their own tax rates. Some of them, I believe, will have their own armies and their own communication systems, and I think they will almost become a currency unto themselves. And people will flock to put money into the shares of these companies as a currency alternative. I can't tell what those names of these companies are yet, but I am looking. My guess is they are already among us. They are multinationals, and I think probably the thing to look for is managements that have a vision for creating companies as I have described.

JB: In the past, people have considered government bonds as being a safe haven dog bone, but you are saying that these great evolving corporate empires may be better sanctuaries for one's dog bone assets and, particularly in the case of fixed income, a better option than buying the debt obligations of deadbeat governments.

Larry Jeddeloh: Yes, I think that's exactly right. You are starting to see inklings of that now where you see corporate bond rates trading down through government rates in a few cases, and I think this is early days. This is not a one-off or an accident. I think the market now is starting to separate out credit quality, which is the other thing that will happen. I think if we're still sitting here in ten years there'll be a complete reworking of the credit rating system, and I think, in many cases, these corporates are going to come out looking very, very attractive relative to governments in terms of balance sheet and ability to pay.

John Budden's Interview with Don Lindsey
April 2015

About Donald W. Lindsey

Donald W. Lindsey joined the American Institutes for Research as Chief Investment Officer in November 2014. Prior to that time, he was chief investment officer of George Washington University from April 2003 until October 2014, where he was responsible for management of the university's $1.4 billion endowment. He also was a professional lecturer of finance in the GW School of Business, where he taught applied portfolio management in the MBA program. Prior to joining GWU, he established the University of Toronto Asset Management Corporation (UTAM) in May 2000 and served as its first president and chief executive officer. UTAM was established to manage the University of Toronto's $4.0 billion CAD in endowment and pension assets. He began his career with the University of Virginia Investment Management Company in 1987, where he served initially as investment analyst and proceeded to become assistant director of investments, senior investment officer, and director. He has taught in the McIntire School of Commerce at the University of Virginia and the Rotman School of Management at the University of Toronto.

In addition, Don has appeared several times as a guest on CNBC and Toronto-based Report on Business Television. He holds the CFA designation, and has also taught CFA exam preparation and other courses in Croatia, Romania, Japan, South Africa, Italy, the U.K., and Switzerland and has served on the CFA Institute Council of Examiners. He was a member of the Investment Advisory Committee of the Virginia Retirement System from 2004 to 2014.

Don holds a BA in Political Science from Virginia Tech, an MBA from James Madison University, and a Master of International Policy and Practice from George Washington University.[9]

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John Budden: Don, you have a far-sighted institutional perspective, and I consider you to be way ahead of the pack of status-quo index-hugging investors. How do you envisage the next ten to fifteen years for financial markets within the context of Nikolai Kondratieff's long-wave theory?

Don Lindsey: I'm going to preface this, John, by just saying that Kondratieff is extremely important for successful investing – not because it is predictive of what markets are going to do, but because it forces one to focus on the regime or investment environment that you are currently undergoing and that is about to unfold over the next several years. Efficient market theorists always think in terms of the market being efficiently priced, and past information is not useful for providing you with any insight about what future returns are going to be. I believe that is completely false, because markets are very regime-like in nature, and we have seen it many, many times in the past.

So let's compare and contrast the current regime that we're in and the one that we are likely to be in over the next ten years to the prior regime where you had multiple expansion of stock prices because inflation was coming down and because interest rates were dropping rapidly. You also had globalization of markets taking place for the first time. So investors not only could invest in their own country but also were able to access markets around the world. You had commissions coming down, and the transaction costs of investing came down and brought more people into the market in the 1980s. The 1990s were a period of relatively little geopolitical stress. The world was basically at peace. All this contributed to a major bull market and what happens in all equity markets: the more they go up, the more people want to get on board, and, sooner or later, markets become overvalued.

Normally the overvaluation, the bursting of that bubble, is a good thing because it brings prices more in line with their instrinsic value. That's what a lot of people thought that 2001 and 2002 was. But actually I believe that 2000 going into 2001 was the beginning of a significant regime change as outlined by the work of Kondratieff. And so, right now, we are in a period where there is tremendous geopolitical stress. You have interest rates at all-time lows, but what that's telling us is that interest rates over the next ten years have only one direction to go and that's up. Several factors point to the possibility of an eventual massive devaluation of the U.S. dollar taking place, which ultimately is very inflationary and, obviously, the last decade's major increase in commodity prices may ultimately be a precursor to an inflationary environment.

So investors really need to focus on the fact that what worked in the '80s and '90s will not work for the next ten years. We're in a completely different regime where one has to invest in cash flows that are going to grow with the rate of inflation. And that really takes you out of financial assets and into real assets. However, there is little visibility right now as to when the environment

will turn. The latest rapid plunge in oil prices and the potential negative impact it will have on the exploration and production industry probably means that rates will stay low longer than we think it reasonable.

JB: Larry Jeddeloh met with his old friend the sage City of London investor Teddy Butler-Henderson in London in 1999. He told Larry that he remembered Alan Greenspan telling him, at a lunch in the '80s, that if he ever became chairman of the Fed, he had a way to "push back the tides."

Don Lindsey: Wow!

JB: The baton was handed from Mr. Greenspan to Ben Bernanke and now on to newly appointed Fed Chair Janet Yellen, who appears to be an apt candidate to carry on the tradition. With this backdrop, how do you handle the fixed income portion of your portfolio?

Don Lindsey: The big mistake that the policy-makers have made in the last decade, and this is both on the monetary side and on the fiscal side, is they've been treating slowdowns in economic growth as cyclical events. In other words, thinking in terms of the normal business cycle where you can use monetary policy to buffer the impact on the economy and use fiscal policy to buffer the impact on the economy. That is, stabilizers that can be put in place to help the economy recover. The problem is that with the massive accumulation of debt, we now have structural damage that we have to work out of. It's not cyclical in nature at all, meaning that conventional policies will not work. They'll only make the situation worse.

The U.S. has one advantage over a number of other sovereign countries in that all of our debt is denominated in our own currency, and the dollar continues to be the world's reserve currency. That delays the inevitable because the Federal Reserve can just keep ramping up money supply. But what happens, it's like a spring that keeps being compressed. That spring can only get so tight and, at some point, it's going to release itself and explode. At some point you have not only massive inflationary pressures because of devaluation of the dollar but also the fact that, at some point, investors will demand a credit premium. Because with U.S. debt, unlike what we saw in the summer of 2011, when S&P downgraded U.S. debt and everybody piled in and bought more, that reaction, at some point, will not take place. You will have more sellers than buyers of U.S. Treasuries. And I think we're going to see that scenario unfold.

So I think what it looks like is that, so long as policy-makers continue to treat the current economic scenario as a cyclical rather than as a long-term structural problem, things will just continue to deteriorate, ultimately setting

us up for a massive devaluation of the dollar and high inflation. The other significant problem is that the U.S. has relied only on monetary policy and fiscal policy has been ignored for years. The damage from the lack of sound fiscal policy cannot be delayed indefinitely.

JB: Markets are vulnerable to big wild card accidents that could prove particularly dangerous for status-quo money managers. How are you positioning your portfolio(s) to be both defensive and offensive?

Don Lindsey: One very unique situation that we have right now in this current regime is that we've had a shift in growth and a shift in wealth, where wealth and growth are shifting from the developed world to emerging economies. Meaning Japan, Europe, and the U.S. are likely to continue to see very slow growth for many years, but you will continue to see rapid growth in emerging economies because of the fact that income per capita is now reaching a tipping point where it is creating a new and emerging middle class that wants access to a wide range of goods and services for the first time. And so we have a real supply and demand imbalance that is unlikely to correct itself and not even possible to correct itself in the short to intermediate run in terms of materials needed to fuel the economies of these growing middle classes. I'm thinking in particular of energy, petroleum, natural gas, anything in the energy complex, in spite of the recent and sharp decline in energy prices. Also, of course, agriculture because there is only so much arable land in the world, and it takes a long time to increase supply. What we are seeing now is that agricultural commodities' stock-to-use ratios have shifted to the point where there is very, very little buffer left. And we were seeing that in the energy complexes as well prior to the North American shale gas and oil revolution. There's very little buffer because you can't increase supply in the short to intermediate term. So that presents, in itself, the perfect investment opportunity for long-term investors. Because it means the return on the capital in order to ultimately meet that growing demand – there's going to have to be tremendous capital needed, or put in as capital expenditures, to bring supply online over the next several years. The return on that capital is going to be much higher than one can get on the glut of financial instruments that exist.

So whereas the '80s and the '90s were a period of financial engineering whereby you did not have to own anything concrete, you owned basically a contract, a derivative that was tied to some other value and you applied massive amounts of leverage to that to capture a return, those days are over. And over for good. Or at least for a very long time. Now you have to own

physical assets that generate growing cash flows. It's not a matter of saying, I need to diversify the portfolio and have X percent in stocks and X percent in bonds and keep that static, it's a matter of totally shifting your portfolio to this new dynamic and moving away from these financial assets into real assets. So as 5, 8, 10 percent investment in a so-called real-asset bucket is not going to make it for the institutional investor, for the long-term investor.

JB: Now we portray the portfolio for Kondratieff Winter as being the dog bone portfolio, meaning that a clever dog takes a prize bone and buries it in a secure spot and then when our dog gets another precious bone he or she buries in another strategic location. Our point is that you must find really safe and segregated places to bury your portfolio of dog bones. What places in the world do you favour, with a Kondratieff Winter time horizon of ten to fifteen years?

Don Lindsey: Well. My favourite dog bone is to own agricultural land. And then lease it to professional farmers that can make good use of that land and grow crops that will then generate cash flow. In terms of where I want to own that land, I certainly would want to own some in the U.S. because the U.S. infrastructure for exporting is very, very good. We have a great rail system, and great inter-water transportation, inland water transportation system. But I also like the idea of having geographically diversified farmland, so Canada would be my next favourite spot because Canada has a vast array of resources that's going to help their economy over the next ten years. Brazil is my other favourite spot because most of the new arable land that will be brought into production in the next ten years is going to be in Brazil. And I expect that, as that demand is met, the price of the land is going to go up significantly. And then, finally, I would say Australia is another favourite geography of mine. So owning agricultural land that is being farmed and producing crops in those areas is my favourite dog bone.

JB: How do you feel about mineral resources, petroleum, and precious metals, and do you favour shares of great companies over the physical commodities?

Don Lindsey: I think that also needs to be a significant part of an investor's portfolio. For the same reason that I cited where you have an emerging middle class that's growing rapidly and their consumption is growing rapidly, and their discretionary income is growing rapidly, that means that a whole wide array of infrastructure is going to be needed as areas urbanize and populations move into cities and become denser. You need more roads, more housing, you need a wide range of products that require minerals of different types. For instance, China is the fastest-growing automobile market in the world, and

it's also the largest automobile market in the world – but (in 2013) there's less than 10 percent penetration. As that moves from 10 to 15 percent and then 20 percent, that will require massive amounts of raw material, iron ore, copper. So the outlook for the companies that produce and own those resources is very, very favourable. I would also point out that, as technology is evolving, we're finding that the way a lot of consumer electronic consumer goods and eventually even cars are being powered will require a lot of lithium batteries. That's going to be a growth area. So any company that is tied into that theme is going to do very well.

JB: What would the asset mix be in your dog bone portfolio, including the fixed income component?

Don Lindsey: I think that you can have a portfolio that's oriented towards real assets but still have a very well-diversified portfolio. So within my stock portfolio, I want to eliminate certain industries. I don't want to own financials. I don't want to own banks. I don't want to own domestic consumer goods and service companies, meaning retailers that operate only in Europe or only in the U.S. – restaurants and the like. What I want to own is a very heavy allocation, at least 15 or 20 percent, in energy producers. So both natural gas and crude oil, as well as the service providers to those industries, the oil service companies. I also want to have a significant allocation to mining and mineral companies that are extracting minerals out of the ground. And then, further up the production chain, I want to own the industrials that can take those raw materials and turn them into higher value-added goods that are being demanded in the rapidly growing economies. So I think I can structure, both geographically and by industry, a very attractive portfolio and, in terms of that weighting and equity, it should be the vast majority of my portfolio – I would say about 80 percent.

The other 20 percent in terms of bonds is very simple. Even though they have performed well over the last several years, I do not want to own long-duration Treasury securities. At some point, without warning, they will be subject to huge losses due to rising rates. What I want to own are the sovereign bonds of exporting countries denominated in their own currency. So that's not just emerging economies like China and Brazil, but also the bonds of developed commodity-exporting countries like Australia, Denmark, Canada, and Norway. Those are likely to be the best credits over the next ten years.

JB: What sort of allocation would you devote to precious metals and if so, why and in what form?

Don Lindsey: Well, I think you want to do it through a structure of both owning

the gold mining companies and owning the actual physical assets. Gold is really the only commodity I would want to own outright. Because it basically serves as a reserve currency in an environment where the dollar is going to be de-emphasized as the world's global currency. It's certainly not going to be an environment where the euro, or another single currency, will become the world's reserve currency. It's more than likely to be a basket, and that basket may, in fact, include gold, but that's going to play out over a number of years, and that uncertainty means that gold will continue to go up in price, particularly since it is denominated in U.S. dollars. And so, when you own the physical outright, you want to have anywhere from 5 to 10 percent – but I wouldn't stop there, you'd want to own the gold mining companies as well.

JB: Could you break down your dog bone portfolio's asset mix in term of percentages?

Don Lindsey: What I would want would be a mix of non-tradable assets and tradable assets like stocks and bonds. So my non-tradable assets, meaning that they're not priced on an exchange on a daily basis, would be about 10 to 15 percent agricultural land. I want another 10 percent in mineral rights, or as direct equity stakes in companies that are producing oil and gas. That takes us up to about 20 or 25 percent. Then I want to own tradable assets that are tied to those industries. So another 20 percent in energy stocks and energy service companies. Another 20 percent in mining and materials. And then I would also have about a 10 or 15 percent allocation to publicly traded companies that are tied to the agricultural industries. So that would mean fertilizer, seed companies, the producers of farm machinery. Then, when I get to my bond portfolio, which I said is basically sovereign debt of commodity exporting countries, that's 20 percent.

JB: Where would your gold holdings be within those groupings?

Don Lindsey: It would be in the mining and materials.

JB: Is it fair to say that you are comfortable with an unconventional institutional portfolio?

Don Lindsey: Yes, absolutely. Because it moves away from the idea that you have to be structured relative to some equity index which, when it comes right down to it, owning an equity index does not in any way guarantee you are going to produce positive real rates of return in every environment. And I certainly don't believe that it will in the current environment.

JB: So you are talking about real, risk-adjusted, absolute rates of return.

Don Lindsey: Absolute returns. I don't even want to focus on what the Dow does or what the S&P does; I think that's irrelevant, and I think people will realize that in another ten years.

JB: With this portfolio, you should be able to go off to a desert island for ten to fifteen years and return smiling?

Don Lindsey: Absolutely. And I think there are two things that give me comfort. That is, this type of portfolio will do extremely well in an inflationary environment but, even with low to moderate inflation, you're still going to have major changes taking place in the world due to the growing middle class of emerging economies. And so, basically putting together a portfolio that provides goods and services to that customer base …

JB: Jim Rogers said that the commodities-based portfolio will do well in both inflationary or deflationary scenarios. In an inflationary period commodities will go up naturally, while in deflation, governments will print, and in that instance useful commodities will again go up in value. So it looks like a win-win.

Don Lindsey: It's a win-win. It covers you under both inflation and deflation, and it certainly covers you under the continuing monetary policies and fiscal policies that the developed world has been following.

JB: Well, we're going to talk to you when you get back from your around-the-world sailing trip for the ten to fifteen years, or that stay on a desert island. This is great, Don, thank you very much.

John Budden's Interview with The Right Honourable Lord William Rees-Mogg

September 2011

About Lord William-Rees Mogg (1928–2012)

William Rees-Mogg, Baron Rees-Mogg was an English journalist and life peer. He was educated at Clifton College Preparatory School in Bristol and Charterhouse School in Godalming, followed by Balliol College, Oxford. He was president of the Oxford Union in 1951.

Rees-Mogg began his career in journalism in London at the *Financial Times* in 1952, before moving to *The Sunday Times* in 1960, later becoming its deputy editor. He contested the (Conservative) Chester-le-Street, Co. Durham 1956 by-election and 1959 general election.

Rees-Mogg was editor of *The Times* from 1967 to 1981. He continued

writing columns to the time of his death in 2012, including, latterly, for *The Times*. In 1978, he was High Sheriff, Somerset; vice-chair, Board of Governors, BBC 1981–86; chair: Arts Council of Great Britain 1982–89 and Broadcasting Standards Council 1988–93. In 1988, he was raised to the peerage as Baron Rees-Mogg of Hinton Blewitt in the County of Avon.

Rees-Mogg was co-author, with James Dale Davidson, of *The Sovereign Individual, The Great Reckoning*, and *Blood in the Streets*.

His directorships included Pickering & Chatto (Publishers), which published the complete translated works of Nikolai Kondratieff in 1998.

■ ■ ■

John Budden: In 1987 you and James Dale Davidson wrote *Blood in the Streets*, then in 1991 you wrote *The Great Reckoning*, which, in contrarian fashion and with uncanny accuracy predicted major market events that came to pass, and it was no accident because you are also an expert on Nikoali Kondratieff's long-wave theory.

Lord Rees-Mogg: You'll find that if you get hold of a copy of my column in tomorrow's *Mail on Sunday*, which is almost wholly devoted to Kondratieff and the question of the length of time the current depression should be expected to take.

Note: The following article is reprinted with permission of *The Daily Mail* <http://www.dailymail.co.uk/debate/article-2033362/WILLIAM-REES-MOGG-Stuck-wheel-misfortune-It-decade-great-turnover-Asia-catches-West.html>.

Stuck on a wheel of misfortune:
It will be the decade of the great turnover when
Asia catches up with the West
By William Rees-Mogg

Economists may question whether business cycles exist, but they certainly behave as though they do.

Most investors talk of double-dip recessions, and discuss whether we are now trapped in one, at least in the United States and Europe. I sometimes find myself quoting other commentators on the world economy.

When I do, it is most likely to be Martin Wolf of the *Financial Times*. I quote him partly out of respect for his ideas and partly because I know global businessmen will also have read him. Last week it was Wolf himself who was quoting two other commentators, Carmen Reinhart, who is a senior fellow of the Peterson Institute for International Affairs in Washington, and Kenneth Rogoff of Harvard.

They call the present economic situation 'the second great contraction'. The first great contraction was the Great Depression of the Thirties. There is a close resemblance between the Great Depression and the present one.

The Great Depression fitted reasonably well the pattern of the 'Kondratiev wave' of economic activity occurring in 50-year cycles. The Great Slump of 1932 was a cyclical depression that arrived on time; 2008 was a depression that arrived about 30 years after it was first expected, with the collapse of Lehman Brothers. Nevertheless, the current depression is looking only too much like the Thirties slump.

Kondratiev was the Russian economist after whom the business cycle was named by the Austrian economist Joseph Schumpeter, who did his main work on the subject in America in the Thirties. Kondratiev's basic idea was first stated in 1926.

He advanced the theory of a 50-year cycle: 'The material basis for long cycles is the deterioration, replacement and extension of the capital goods, with long production times and vast production costs. The replacement and extension of the stock of those items is not a smooth process but a jerky one.'

Schumpeter put dates to Kondratiev's cycles. He saw cycles of prosperity in the periods from 1787 to 1800, from 1848 to 1857 and from 1898 to 1911, with depressions occurring from 1814 to 1827, from 1870 to 1884 and from 1926 to 1938.

One can trace these cycles back to the early 18th Century. The firm starting point is the depression that followed the South Sea Bubble of 1720. There were regularly depressions in Britain every 50 years between 1720 and 1930.

The study of the Great Depression of the Thirties led James Davidson and myself to write a book entitled The Great Reckoning. I do not think economic history can give all the answers, but it does give some. Business life tends to have a rhythm.

One of the reasons older investors tend to have an intuitive advantage over their younger colleagues is that their experience of past cycles in markets offsets the greater technological understanding of younger investors.

It is also important that people should understand that in business 'the trees do not grow to the sky' – meaning things cannot continue past their natural boundaries – a favourite maxim of Winston Churchill, which he applied to war rather than to business.

The present depression in Western markets will not last for ever. If we are now battling through Carmen Reinhart's 'second great contraction', it may be something of a comfort to have Schumpeter's dating for some previous depressions.

That gives them an average of 13 years as compared with Wesley Mitchell, another economist, who postulated a seven to 11-year business cycle.

An average depression can be regarded as likely to last for seven to 13 years. These figures depend on definitions of a 'depression'.

If one looks at the slump of the Thirties, it began in the New York financial crisis of 1929 and it did not finish until the outbreak of war in 1939, which wholly changed the economic expectations of all countries. That is a ten-year depression.

In Britain recovery came rather earlier, and in Germany rearmament after Hitler came to power created a domestic boom. No doubt there are many cyclical theories that depend on coincidence rather than sound analysis.

Kondratiev was, however, central to the work of Schumpeter, one of the leading economists of a period that contained Maynard Keynes and other economists of the first rank. My favourite is the American economist Irving Fisher, also basically a monetarist, though an interventionist. He reviewed Kondratiev very favourably.

If we assess the probable period of the present depression, it may not come to a definite conclusion until around 2020. But that does not mean there will be no economic progress, nor that it is impossible to take advantage of the resources that will be released in the intervening period.

This will be the decade of the great turnover, when Asia catches up with the West, and in many areas, no doubt, overtakes us.

Most of the economists who have studied the Great Depression believe technology played a crucial part both in the decline and in the recovery.

The technologies of the coming decade seem likely to change business and to change our economic system. However, there will be much work to be done before recovery is achieved.

JB: Then this talk is very timely. Am I correct in assuming that we are in the latter part, the latter half, of Kondratieff Winter …

Rees-Mogg: Yes.

JB: And that you are putting together a dog bone portfolio for your grandchildren, that is a portfolio that, after Kondratieff Winter, would hopefully retain its purchasing power.

Rees-Mogg: Yes.

JB: How do you see the next ten to fifteen years, which we will call Part II of Kondratieff Winter?

Rees-Mogg: Well, I think, obviously, it is going to be a very difficult period. The most important adjustment, global adjustment, now taking place, is the shift of economic advantage from the North Atlantic to the Far Pacific, from whatever you call the modern world to the Asian world. And that this progress will be largely completed by the early 2020s. And that it will be for Western investors to have significant proportions of portfolios in anti-inflationary stocks,

primarily gold. And significant proportions in Asian stocks. Apart from that, the old-fashioned value stocks in countries with relatively unspeculative businesses will balance out reasonably well.

JB: Now, my friend Dean LeBaron, who inspired the idea of the dog bone portfolio, says that, if you watch a clever dog, they will take their precious bone and bury it somewhere in the garden. And if our dog finds another good bone, he will bury it in a different spot. Which countries would you choose for your financial dog bones?

Rees-Mogg: Well, I think in this country [the U.K.], basically, it's successful retailers. We've got some of the best retailers on earth. They've got very substantial assets, and they are concerned to maximize the return on their assets and are very good at doing that. And the shares are not over fashionable because people are not looking to the United Kingdom as a place where they will find it easy to make money. Nevertheless, good shares contending with problem economies – good companies, good, well-managed companies contending with economic difficulties – can survive, particularly as one gets near the end of the Kondratieff recession.

JB: Jim Rogers picked Singapore and China as places for investment through Kondratieff Winter, and another destination is Canada. Are there countries that you think are good hiding places? It's a tall order to ask you about countries that will remain stable through this type of environment over the next fifteen years.

Rees-Mogg: As far as countries go, I think it's sensible to avoid countries where in the past investors have lost their money. I've never known anybody who didn't lose money by investing in Argentina, for instance. I think that China is not the right answer for Asia. Possibly Singapore is.

JB: And in terms of the mountain of debt that's overwhelming the world, how do you see this debt being wiped out?

Rees-Mogg: I think it is more or less inevitable that there will be a good deal of inflation, because that is the only way that governments can reduce the burden of their debts. And, as they've got to devalue the debt situation, it is plainly in the interests of governments to inflate the burden off their currencies. They've always done it in the past when they got into that situation, and I think they will do it again. On the other hand, the economies that will do best are the economies that don't have to follow that course.

JB: In England, recently, and sadly, you have experienced disruptions and riots … What is the potential that social unrest, which you talked about in *The Great Reckoning*, will unfold during Kondratieff Winter?

Rees-Mogg: The British riots represented a real change in public mood.

JB: Do you feel that there are similarities to the Weimar Republic period in the 1920s in Germany?

Rees-Mogg: I don't think there are in Germany. I think that the countries that are in, what you could call decadence, are much more the Mediterranean European countries who've not got clear policies and who have disreputable governments. Look at Italy.

JB: Is the period we are in now somewhat analogous to the Weimar era in the 1920s?

Rees-Mogg: Somewhat analogous, but we don't actually have strong dictatorial or authoritarian movements. We haven't got a strong Nazi movement; we haven't got a strong fascist movement. That's a great protection.

JB: Will the bad economics lead to frightening developments?

Rees-Mogg: Politics will deteriorate if we don't solve our problems and if we go into inflation. Inflation always causes further deterioration of the social order.

JB: Lord Rees-Mogg, thank you for your valued insights, it has been an honour and a pleasure to talk with you today.

John Budden's Interviews with Jim Rogers

This section combines two interviews, which took place in June 2011 and June 2012 and was updated in April 2015.

About Jim Rogers

James Beeland Rogers was born in Baltimore, Maryland, and raised in Demopolis, Alabama. He started in business at the age of five by selling peanuts and by picking up empty bottles that fans left behind at baseball games. He got his first job on Wall Street, at Dominick & Dominick, after graduating with a bachelor's degree in history from Yale University in 1964. Rogers then acquired a second BA degree in philosophy, politics, and economics from Balliol College, Oxford University, in 1966.

He is a co-founder of the Quantum Fund and is current chairman of Rogers Holdings and Beeland Interests, Inc. He is the author of several books

on investment, some of which have been translated into Chinese, Japanese, and other languages, as well as a biography in Chinese only.[10]

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June 2011

John Budden: I was overwhelmed after reading Jim Rogers' plain speaking book *A Gift to My Children: A Father's Lessons for Life and Investing*. It's a timely must-read for all ages. Jim, now I truly understand the focus and the passion that you are devoting to your daughters' future. As a wise father looking into the future as realistically as possible for your children's sake, I want to ask you, how do you envisage the next ten years for financial markets within the context of – if we call it – Nikolai Kondratieff's long-wave theory, referencing macroeconomic factors and potential socio-political fallout?

Jim Rogers: Well, I certainly expect very difficult times in financial markets for the next decade or so. The financial centres and the financial profession are in decline – certainly relative decline if not absolute. I think it's absolute decline. We've had many periods in world history when the financial types were the centre of the world, and then we've had long periods when the producers of real goods were in charge. It's hard for many people to believe that the '50s, '60s, and '70s were a backwater for most of Wall Street and the City of London and Toronto – you know, all financial centres. Then along came the bull market starting in the '80s and for the next thirty years we had hundreds of thousands of people getting MBAs and heading to the financial centres. Well, that's finished. First of all, in 1958, America graduated five thousand MBAs a year. Nobody else graduated any. Last year America had over two hundred thousand MBAs and the rest of the world had tens of thousands as well.

So you had massive competition in a period of staggering debts worldwide, which are going to lead to more problems, and you have governments around the world coming down hard on the financial industry – regulations, taxes, requirements, etc. At the same time, finance is going to be more and more difficult. There will be great opportunities on the short side in the future. But at the same time, we have hundreds of thousands of MBAs flocking to and clogging up the financial centres. In America we have more graduates who study physical education than who study agriculture or mining. Nobody worldwide is going into the production of real assets. There are big shortages developing. The average age of farmers in America is fifty-eight years; in parts

of Japan there are no farmers at any age. There's nobody to farm the fields, and they are sitting there empty. This is going on worldwide. At a major American institution, the Colorado School of Mines, which has been a premier mining school for decades – things are so slow they've started giving MBAs. Nobody wants to study engineering anymore.

So finance is the wrong place to be. Production of real goods or investing in real goods is the place to be. Stocks, in the West anyway, are going to continue to be in a big trading range. At best, bonds will be in a bear market for most of that ten-year period that you mentioned. Currencies will see staggering turmoil. The largest creditor nations in the world now are China, Korea, Japan, Hong Kong, Singapore, Taiwan. We know who the largest debtors in the world are; we know where they are. You're going to see lots of currency turmoil; you'll see exchange controls probably in some nations, more nations. You'll see social unrest, riots and more countries, more governments falling, more nations falling.

And my way of dealing with it here in 2015, anyway – I'm long commodities, which have been beaten down, a few currencies, and Chinese, Japanese, and Russian stock markets, which have been depressed. I'm short some emerging markets stocks, U.S. technology stocks, one bank – which I mentioned – and I'm short junk bonds in the U.S. because the spreads are so narrow. If the world economy gets better, I'll certainly make money in my commodities. But if the world economy does not get better, then I want to own commodities because governments will then print money. It's the wrong thing to do, but that's all they know to do. So when people debase currencies or print money, the only way to make money is to own real assets. So that's my view of the next ten years in a nutshell.

June 2012

JB: A year ago, I asked you about the book that you wrote for your daughters, *A Gift to My Children: A Father's Lessons for Life*, and I was wondering how your family are.

Jim Rogers: Everybody's terrific. We're glad to be in the U.S. It is summer holidays, so we're very glad to be here, see the grandparents, see the family. We're having a terrific time.

JB: Now down to the reality of the markets. Europe's a warm-up and a convenient distraction during the U.S. 2016 election year, but the main event coming up will be the U.S. deleveraging, and I wanted to get your take on that.

Jim Rogers: This year, because of the election, there's going to be good news coming. Washington is going to manufacture good news if they have to because obviously everybody wants to get re-elected. The situation is getting worse, though, because the debt is going through the roof. In 2002, we had a recession; in 2007 and 2008, we had another one, and it was much worse because the debt was so much higher. I expect another recession some time in the foreseeable future since it has been six years since our last one, and it's going to be worse still because the debt is going higher, higher, and higher. You said deleveraging. Maybe some people are deleveraging, but the country as a whole is sinking deeper into debt, and it is going to be bad for all of us.

JB: You and I both went through the '70s inflationary market, and I wonder what you think is different this time around?

Jim Rogers: In the 1970s, America was a creditor nation. We are now the largest debtor nation in the history of the world. So things are a lot different this time and a lot worse, unfortunately.

JB: How do you see the European situation evolving from here?

Jim Rogers: Europe has debt now. Europe didn't have many debts in the '70s for many reasons, historic reasons mainly, but Europe now has problems with many debtor nations plus a single currency, which they didn't have before. Unfortunately, politicians like to take the easy way out, so I would suspect that, in the next few years, some country is going to leave the euro because some politician is going to run on a platform that "I'll save us all, I'll get us out of the euro." That would be a mistake, but politicians make mistakes all the time, so I suspect you'll see a country leave and another politician in another country will say, "Oh well, if that will get me elected, well I too will run on a platform of getting out of the euro." So you will probably have three or four countries leave, which will be bad. It will cause a lot of turmoil and strife in the financial markets. It will not be good for the people who are leaving. But somebody will do it. If the euro survives that, then the euro will be a much stronger currency. Unfortunately, I don't think the euro will be able to survive as we know it, because that would be such a blow to the financial markets.

JB: The U.S. dollar seems to be the best currency horse in the glue factory for the time being.

Jim Rogers: It's the least bad. It isn't even the least bad, it is traditionally the currency people have turned to in times of turmoil, so out of habit many are turning to the U.S. dollar again. It is not a safe haven. I don't consider the U.S.

dollar a safe haven at all. But, unfortunately, many people do, so I own the dollar because of that and many other people will, too.

JB: What about assets that will act as survival equipment during the period ahead?

Jim Rogers: In my own portfolio, I own currencies and commodities, and I'm short a few stocks. I'm long commodities because there are shortages developing, and if the world economy gets better the commodities will go higher in price. If the world economy doesn't get better, governments are going to start printing money. It's the wrong thing to do, but that's all they know to do. So they will start printing money, and, whenever money is printed, historically, the way you protect yourself is to own physical assets, whether it is silver, or rice, or whatever it happens to be.

JB: When you take a look at the various commodities, which ones do you really favour?

Jim Rogers: At the moment I own them all, but if I were buying today, I'd own agriculture. Agriculture is very depressed on a historic basis. If I was going into commodities now, for the first time, I would buy agriculture.

JB: And how do you feel about gold and silver?

Jim Rogers: I own gold and I own gold and silver. The price of gold and silver started correcting in 2011. If they go down, I would buy more. But I don't think the correction is over yet.

JB: In a zero percent interest rate environment are bonds, U.S. Treasury bonds, Swiss negative interest rate bonds, the wrong place to hide?

Jim Rogers: I would not be buying bonds, definitely not. For example, I cannot conceive of lending money to the U.S. government for thirty years at 2 or 3, or 4 or 5 or 6 percent interest. It is just absurd. The U.S. is the largest debtor nation in the history of the world. We've got inflation coming back. We've got a huge bond issuance coming back. No, I cannot conceive of buying most bonds, not at these rates.

John Budden's Interview with Eric Sprott

February 2014

About Eric Sprott

Eric Sprott has more than forty years of experience in the investment industry. After earning his designation as a chartered accountant, Eric entered the investment industry as a research analyst at Merrill Lynch. In 1981, he founded Sprott Securities (now called Cormark Securities Inc.), which today is one of Canada's largest independently owned securities firms. In 2001, Eric established Sprott Asset Management Inc.

His extensive list of accolades include: Canadian Investment Awards' Opportunistic Strategy Hedge Fund Award (Sprott Hedge Fund L.P., 2004); MarHedge's Best Canada Based Annual Performance Award (Sprott Offshore Fund Ltd., 2006); HFM Week's Best Long/Short Hedge Fund Globally (Sprott Offshore Fund Ltd., 2008); Winner of Absolute Return's Hedge Fund of the Year (Sprott Capital LP, 2010).

Over the years, Eric has personally been the recipient of numerous awards and honours, including one of Investor Digest's Canada's Best Investors (2004); Ernst & Young's Entrepreneur of the Year (2006); Investment Executive's Fund Manager of the Year (2007); Advisor.ca's Top Financial Visionary (2011); Terrapinn's Most Influential Hedge Fund Manager (2012); and the 2012 Murray Pezim Award for Perseverance and Success in Financing Mineral Exploration (2013).

More recently, Eric has been elected Fellow of the Institute of Chartered Accountants of Ontario (FCA), a designation reserved for those who demonstrate outstanding career achievements and service to the community and profession.[11]

John Budden: In your 2009 article "Dead Government Walking," you were among the first to articulate that the U.S. government was insolvent because of unprecedented debt levels and unfunded liabilities and that there was no hope of avoiding a default. Five years have come and gone since you wrote that piece. Have things improved or are we still pushing on a string?

Eric Sprott: It's a great question, John, and obviously things have continued to get worse. I don't know the exact data for 2010, 2011, 2012, and 2013's not out yet, but I suspect that each year we added $5 trillion to the unfunded

obligations. And the beauty of unfunded obligations is you don't have to pay for them yet. So even though you know you have them, the time when the rubber meets the road is some time out in the future. The fact is that today, the unfunded obligations probably total some $80 trillion. We have a $17 trillion known debt outstanding so we've got a $97 trillion of debt with a creditor whose income each year is about $3 trillion and whose expenses each year are around $4 trillion.

There's no doubt in my mind that the problem has worsened. Nobody will deal with it. Nobody's going to deal with it until all of a sudden, just like the Detroit pensions, they couldn't write the cheque. They had to face reality. We're broke and you pensioners might get 30 cents on the dollar, if you are lucky. And that's what will happen to the U.S. population as well.

JB: What other risks threaten the debt-laden, fiat global monetary system? The bullish U.S. dollar trend is your friend, until it ends.

Eric Sprott: The concern is that everyone turns their back on fiat paper because, as many experts have agreed, the artificially high U.S. dollar is not where we want to have our wealth, long-term. The Chinese have said that, various other central banks have said that. Vladimir Putin's government is advocating that the U.S. dollar should be dropped as a medium of exchange in bilateral trade. So people who look at the numbers know exactly what the situation is and that they should prepare their people for the eventuality of the dollar going down sharply. It is well in process. We have seen all sorts of defaults. Kazakhstan, Argentina, Venezuela, and there will be many, many more where the levels of indebtedness and obligations just cannot be met.

JB: If central banks lose their ability to perform this financial magic, will we enter a new era of excessive money printing, competitive devaluations, and defaults in what is in effect the latter portion of Kondratieff winter?

Eric Sprott: I suspect that has to be the answer. Take, for example, the taper in the United States. If they find that their rates start going up and all the data show the economy is negative, of course they've got to revert to using these same kinds of tools. It's interesting, John, to reflect back on the QEs. We've spent $4 trillion on buying up bonds, and where are we today? We've got new home sales probably as low as they've ever been with all this money printing and we've got auto sales starting to fall off, so I'd think most people would realize that quantitative easing hasn't done the economic job that it was intended to do. It has supported the financial system in the meantime.

Everyone in power seems to think the financial system is the most

important thing so they try to support it by buying the assets from the banks and putting them on the central bank's balance sheets in the full knowledge that the assets aren't properly valued dollar for dollar. If these dubious assets are on the central bank's balance sheets, the Federal Reserve can pretend that they will hold them to maturity and that they will mature at one hundred percent value, which we know they won't. So there's not much choice here. You either let the system go, or you continue to print. We are not sure yet which one they will choose, but I would opt for the continuing to print option.

JB: What's so frightening is that the average citizen, investor, really doesn't fathom what is unfolding.

Eric Sprott: No, the average citizen wouldn't know that because they wouldn't look at that stuff and it isn't publicized. So, for example, when the Department of the Treasury announced their true generally accepted accounting principles deficit last year, something like $5.6 trillion, I guarantee you that was not reported in any mainstream media. You would have to dig to find these things. The mainstream media would never want to tell anybody that things aren't going well because they are supported by advertisers who want things to go well. So you are not going to read about it or hear about it typically but those are the facts of the situation. It's just not going well.

JB: Gold has been a monetary medium for thousands of years, and since the most recent bull run from 2000 to 2011, gold has experienced a major correction. You will recall that from 1974 to 1976, the price of Gold bullion corrected about 45 percent, from $185 U.S. to about $104 U.S. Then gold went up more than eightfold by mid-January 1980. Are we now entering a new up move for gold? What are some of the factors behind this and where do we go from here?

Eric Sprott: It seems obvious to me that the gold price was manipulated through the last two-plus years of decline. We had the German equivalent to the Securities and Exchange Commission come out and say that precious metals were manipulated worse than Libor. I also find it hugely intriguing that the price of gold hit a low on the last day of 2013. When people are manipulating something, they aren't manipulating it for the bank to make money; they're manipulating it for themselves to make money by way of bonuses. So the lower they could close that price, theoretically, the bigger their bonus would be. Now that the regulators have come forward, I would think that the manipulators know that the game is up.

So here we are in early 2014, the price of gold's gone up I guess 11 or 12 percent now. And I think that there's going to be no stopping it when it

resumes its major uptrend because the manipulators know they can't manipulate without the regulator getting involved. So I think we will get back on trend, which means we will probably go to new highs in the next few years, i.e., north of $2000 an ounce in gold and north of $50 an ounce in silver. It is going to be a stunning period for anyone who owns precious metals or the underlying equities.

JB: History is littered with devalued currencies while gold and silver are finite and fungible mediums of exchange that have proved their worth over thousands of years. Are we on the edge of another fiat devaluation as the way to wipe out the gargantuan debt?

Eric Sprott: As you know, there have been all kinds of discussions about bail-ins. We have people in power suggesting we'll use the personal savings of depositors to bail the banks out if they default. We've got bail-in legislation approved in most countries so you can see where they're going. Desperate people do desperate things. I've always had a huge concern about the banking business – that it is unsafe to have your money in a bank. I see that playing out here. We've had some tremendous declines in the emerging markets currencies. We've had a big decline in the Canadian currency and the Australian currency. So people are figuring out that "paper is paper," which, even if devaluation helps exports and inflates away the debt, still means the currency is increasingly worthless. I expect that the U.S. dollar will be coming under extreme pressure in the years ahead, particularly with these signs of the economy getting weak. The reasons to not choose paper versus something real will become more and more obvious to everyone.

JB: Is it fair to say that the legislators, central banks, investment banks, and bullion banks have been complicit in rigging and manipulating markets, as well as using derivatives and the printing press to perpetuate their mega con game. This may sound extreme, but do you think there's more than a bit of truth in all of this?

Eric Sprott: Well, for sure. You see it every day in the markets. One of the reasons I got into gold in the first instance was because I thought the central banks had been selling gold surreptitiously. I don't believe the U.S. Treasury owns any gold, and the amount of purchases would suggest that demand might be twice the annual supply, which means the supply has to be coming from central banks. That's been my premise all along. There's more demand than supply. I almost get sick reading that China's demand is up one hundred percent, the mints' sales are up thirty percent for gold while production goes up one and

a half percent each year and probably won't go up at all in the years ahead. So how do you maintain supplies and have these outsized gains in consumption when there are no offsetting gains in supplies?

I think the situation the central banks find themselves in is that they're looking inside the cupboards and saying how long can we keep this game going on because we're not going to have any gold when it's all over. And I think the German repatriation where they received only five tonnes of gold back from the U.S. last year when theoretically the U.S. owns eight thousand tonnes and they are only able to deliver five tells you that there is no gold there. So I have always believed in the physicalness of gold and of course its attractiveness versus fiat currencies, which is becoming more and more apparent. But just the supply-demand would suggest that this price has to go a lot higher to get more production and to balance off supply with demand.

JB: During the robber-baron era, late in the nineteenth century, there was an adage that "He who sells what isn't hissin buys it back or goes to prison!" That doesn't seem to apply to these guys.

Eric Sprott: Well so far it hasn't. (Laughter.) But as we know, there have been many cases of fraud, up and down the line, in almost all banks. Why people wouldn't think that precious metals are manipulated is just beyond me. It seems so obvious and has been confirmed by the revelation of the German regulator that this has been going on here for the last couple of years.

JB: Eric, how can investors equip themselves to deal with the challenges they face during the latter part of Kondratieff winter, and what sort of dog bone portfolio do you have to fight the battle for investment survival?

Eric Sprott: The easiest thing to do is to own precious metals, the physical precious metals, in one's own possession. Secondly, I think precious metals stocks will be quite stunning investments – in fact, the investment opportunity of my lifetime as I think of how fast these gold stocks will go up. I think people have to own real things, whether it's farmland and/or precious metals, things that in a Kondratieff winter people must have. I totally agree that given the fiat ponzi system in place, that's where you've got to go. I have believed that for quite a while, as have you. And I think it is going to play out in its totality in the coming years.

JB: The Dog Bone Portfolio is a term that was coined by my friend Dean LeBaron, and he feels that a clever dog goes out in the back forty and buries a precious bone in a hidey-hole and then when he gets another precious bone it's buried somewhere else. So there's a geographical question of where do you

hold your assets and then, of course, which institutions within a country do you trust. That's quite a selective challenge.

Eric Sprott: It is indeed. And that's why I always believe you have to hold some of the gold on its own. I know it's dangerous, but it might be even more dangerous having it at a bank because it is likely to get confiscated. You have to choose where you store it very very carefully, and I can't really say whether Geneva is better than Singapore or Singapore is better than Hong Kong – those are all tough questions. But you want to have it spread around. You want some in your own possession, and you want it in an institution where the gold cannot be seized. Because that was always the problem going back to the early '30s when the Federal Reserve demanded that everyone hand their gold in. So I think it is important to have the gold out of the system.

JB: There are a number of countries at the moment selling bonds at incredibly low interest rates. What is your view of the bond market, considering that we have been in a bull and more recently a central bank–orchestrated bull market for more than thirty years?

Eric Sprott: Well, as you know, the bond market is openly rigged. It's rigged by the central banks. Central banks say they want low interest rates. Of course they want low interest rates because it helps the financial system and it helps the government. To think that rates are as low as they are for some of these credits that are out there that obviously don't have much of a chance of surviving is almost unbelievable. I certainly wouldn't suggest that people should be putting money in bonds if we continue to get the kind of economic data that we've had, which are really weak and which will put a lot of pressure on all those balance sheets and, of course, you're not getting any return for it, which is ridiculous.

JB: In the realm of Kondratieff long-wave theory, the word "theory" is the correct application here, you and our friend Ian Gordon have been steadfast regarding Kondratieff Winter, and it looks like it is going to pay off.

Eric Sprott: It will. It is funny how it has been delayed. We really should have crashed in '08 – we did crash in '08, but they came up with these unusual measures, the TARP and the TALF and so on. But the cupboard's getting pretty bare in terms of future manouevres that they can add and there's always another QE in the wings. But people still get it, that even as we continue to print more money, the economy isn't gaining any more traction. That's going to continue. It's not going to get any traction. The 99% is suffering from huge

inflation that is never reported accurately, and I always find that you produce oil and your costs go up 8 percent, you produce gold and your costs go up 8 percent a year, you produce food and your costs are probably going up 8 percent a year. But somehow the inflation rate is less than 2 percent. In fact the cost of health care probably rises double digits every year; everyone's biggest costs in the United States this year. So inflation is not 2 percent; we are just being eroded away in terms of our savings which produce no return. It's financial repression all the way, and you have to find some way to survive it. The survival is obviously in precious metals, the easiest way to go.

John Budden's Interview with Ronald-Peter Stöferle

February 2015

About Ronald-Peter Stöferle

Ronald-Peter Stöferle, Managing Partner and Investment Manager at Incrementum AG in Liechtenstein, was born in 1980 in Vienna, Austria. He has qualified as a Chartered Market Technician (CMT) and as a Certified Financial Technician (CFTe). During his studies in business administration and finance at the Vienna University of Economics and the University of Illinois at Urbana-Champaign, he worked for Raiffeisen Zentralbank (RZB) in the field of Fixed Income/Credit Investments. After graduation, he participated in various courses in Austrian Economics.

In 2006, he joined Vienna-based Erste Group Bank, covering International Equities, especially Asia. In 2006, he also began writing reports on gold. His six benchmark reports called "In GOLD we TRUST" drew international coverage on CNBC and Bloomberg and in the *Wall Street Journal* and the *Financial Times*. He was awarded second-most accurate gold analyst by Bloomberg in 2011. In 2009, he began writing reports on crude oil. Ronald managed two gold-mining baskets as well as one silver-mining basket for Erste Group, which outperformed their benchmarks from their inception. In 2014 he published a book on Austrian Investing, *Österreichische Schule für Anleger: Investieren zwischen Inflation in Deflation*.

His favourite books are *The World of Yesterday* by Stefan Zweig, *Human Action* by Ludwig von Mises, and *The Raven of Zurich: The Memoirs of Felix Somary* by Felix Somary. His favourite quote is "Whatever you are, be a good one" (Abraham Lincoln).[12]

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John Budden: It is a great pleasure to welcome my friend Ronald Stöferle who is speaking to us from Vaduz in Liechtenstein. He is a managing partner and fund manager at Incrementum AG. How are you, Ronni?

Ronald Stöferle: I am very well. Lots of snow over here.

JB: Well I wish I was there skiing with you. To get started. I wonder if you could give us a snapshot of your background and tell us a little bit about Incrementum AG.

Ronald Stöferle: Sure. I used to work for Erste Group for quite a while where I started writing my annual "In Gold We Trust" report in 2006. These reports are known, now, all over the world. Then I set up the commodities research for Erste Group in Vienna so I have been analysing the commodities complex, especially oil and gas, as well. I managed two gold mining baskets and a silver mining basket. Then three years ago I decided to quit my job and set up a new company with some partners, mostly from Switzerland, which is Incrementum AG based in Liechtenstein. We are an investment boutique, focusing on real assets.

I am also developing what I call Austrian investing. This is the subject of a book I have written and looks at managing assets based on the view of the Austrian School of Economics, not because I am Austrian – unfortunately the Austrian School is not taught at all in Vienna – but because I think that the Austrian School asks the right questions and has the right answers. Compared with Monetarists and Keynesians, especially, the Austrian School understands that our monetary system is the root and the cause of all the problems that we are currently facing.

Incrementum AG has a top-down view. We try to understand monetary inflation, the effects of monetary inflation, and this is the starting point of our investment process. This differentiates us from what I call mainstream economists and asset managers who don't have a look at the macro view. I think it is something that's got a great future ahead, as understanding the interplay between inflation and deflation will be crucial for prudent investors.

JB: And besides a fundamental view of the world, you are also qualified as a Certified Market Technician.

Ronald Stöferle: Yes. Certified Market Technician is the equivalent of the CFA designation, which is mostly fundamental analysis, and CMT is mostly for technical analysis. I think many people are quite critical about technical analysis, but I think it just adds more tools to your toolbox. There are many

different aspects of technical analysis. For example, cycles analysis, quantitative analysis, indicators and oscillators, pattern recognition, candlesticks … technical analysis can offer you so much to get a better view and sense of the markets. It has been a great education for me to take this program.

JB: I'd like to hand the mic over to you to hear your view on the world. We've seen the revaluation of the Swiss franc recently, which has been a wake-up call for a lot of people.

Ronald Stöferle: Let me start with a metaphor that we created called Monetary Tectonics. The interplay between inflation and deflation is crucial to understand. We compare the interplay between those massive forces with tectonic plates that are constantly pushing against each other. Perhaps on the surface everything looks quite stable, but under the surface there is enormous pressure building up which is released sooner or later as earthquakes or volcanic eruptions. So what we are doing in our investment process is we try to gauge if inflationary or deflationary forces are stronger at any given moment. The interesting thing is that our inflation indicator showed us decreasing inflation – so disinflation, or deflationary pressure – at the beginning of August 2014. So what we did, we sold our mining equities – we even went short with a small part of our portfolio, because we saw that disinflation was stronger than inflation. Based on the Austrian School of Economics, if a laissez-faire approach would be allowed to work, there would be a whole cleansing process of the system that would be highly deflationary. But this is something that central bankers and politicians want to avoid. So they are trying to reflate the system, whatever it takes.

And we can see all over the world a zero rate interest rate policy. We're seeing quantitative easing programs in the eurozone and especially in Japan. So this interplay between inflation and deflation is crucial for every investor to understand because this is how to really understand the big picture, which is the most important thing at the moment. I don't think that you will be successful going forward with the same strategies and the same things that you applied a few years ago. I think at the moment, our financial system is so fragile that understanding this interplay between inflation and deflation is really crucial.

Just to give you a sense of what we are currently seeing – our inflation model switched to neutral quite recently, which suggests we will see rising inflation rates going forward. This is a nice confirmation that our inflation model actually works in real time because every politician and journalist is

only talking about the deflationary troubles. I think this is also one of the reasons why, for example, the ECB is able to implement massive quantitative easing in the eurozone. So while the market commentators and the politicians are talking about the deflationary scare, the market is already telling us that inflationary pressure from a very low level is rising again.

This is very interesting because everyone is on one side of the boat so we are seeing a very strong dollar, we are seeing incredible valuations when it comes to government bonds, we're seeing that everybody is talking about deflation so if the market realizes that the U.S. economy is not in such a strong stance at the moment, if the market realizes the central banks are really eager to avoid deflation and will try to inflate the system whatever it takes, then there will be, I think, quite a decent opportunity in inflation-sensitive assets and this is what we are focusing on in our investment process.

JB: With this confluence of inflationary and deflationary forces and the backdrop of a central bank magic show, investors are in a real dilemma trying to figure out what they should do to preserve wealth and purchasing power, particularly if we flip into an inflationary trend. How are you advising your clients?

Ronald Stöferle: There is no free lunch on the markets. But if there should be a free lunch, from my point of view it would be diversification. A typical, what's normally called a "balanced" portfolio, is massively overweight bonds – often 80 percent bonds and 20 percent equities. If you are structured in such a portfolio you will have a very unattractive risk-reward portfolio. Because one third of all government bonds is yielding negative rates. Yes, it is a crazy situation. It has never happened on such a global scale. It is a huge monetary experiment, and we are all part of it. But I would say if one is still at the party, you should be very, very close to the exit sign or perhaps leave the party entirely.

Precious metals are very good in this environment. I think gold is in a sweet spot at the moment. We show in our research reports that the worst environment for gold is disinflation. The question is not how high the level of inflation or price inflation is, it's the direction. Do we see a rising or a falling inflation rate? We did a big study which clearly showed that disinflation is the worst environment for gold. We have seen massive disinflation since 2011. Now we are in deflation in quite a lot of countries.

In deflation, gold works pretty well, not in nominal terms but in real terms. And rising inflation rates is by far the best environment for gold. So the risk reward ratio for gold is excellent at the moment. Gold is extremely underowned. When I am talking to friends of mine who love gold – people who are

really into gold and know about the quality and the advantages of gold – even they are quite critical at the moment. We should not forget that gold was the second best–performing currency in 2014. In euro terms, for example, which is most important for us here in Europe, it has been up 11 percent in 2014. And already in the beginning of this year we have seen excellent performance.

We have also seen a massive dollar rally in 2014. We should not forget that we have a dollar rally of historic proportion yet gold was down only 2 percent. And I think that many market participants think that gold absolutely got trashed last year, though in dollar terms it basically went sideways. The market is perhaps telling us that we are at the end of the correctionary phase from its high in 2011, but the mainstream media and the analysts are still pretty bearish, even though I think this is a beautiful setup for gold, for silver, but also for mining equities.

JB: For the last month, gold has been acting well against the mighty American dollar, and our mutual friend, Eric Sprott, categorizes the American dollar as the "best horse in the glue factory."

Ronald Stöferle: I think the long dollar trade is pretty crowded at the moment. Having a look at the outlooks from every major investment bank, everybody is speaking about parity against the euro. I didn't see any bearish note. So this is something that makes me a bit cautious. I think the reason for that bullishness is that everybody thinks that the Fed will hike interest rates sooner or later. Perhaps they will hike. From my point of view perhaps it will be only 25 basis points, perhaps half a percent going forward. I don't see a really big trend change because it is just not affordable. We would see the effects of these rising rates very, very quickly. Therefore if our macro data should get worse and given that the very strong dollar is also a burden for many U.S. companies, we could have an effect that the rising rates will be priced out. This might be the reason why the dollar might get strong. So I think it's definitely a crowded trade based on the assumption the Fed will hike interest rates.

I think from a fundamental point of view, if you ask me euro or dollar, I would say gold. I think that from a technical point of view, the euro is massively oversold, I think there will be a kind of a rally, and I think it is kind of stabilizing at the current level quite well, even though we are seeing all those discussions about Greece defaulting, and so on.

But sooner or later gold will rise on a long-term basis against every fiat currency because of relative scarcity. Having a look at broad monetary aggregates, compared with the growth rate in gold, yes this really shows the relative

scarcity of gold. And you know, John, I am always talking about the stock-to-flow ratio. *I believe that the high stock-to-flow-ratio is the most important reason for the monetary relevance of gold and silver* (interviewee's emphasis). Paradoxically, gold is not scarce – the opposite is the case: it is one of the most widely dispersed goods in the world. Given that its industrial use is limited, the majority of all gold ever produced is still available. The recycling of existing gold accounts for a much larger share of supply than for other commodities. This is also why any significant production expansions or disruptions can be absorbed quite easily by the market. We therefore believe that gold is not so precious because it is extremely scarce, but because the opposite is true: *gold is considered so precious because annual production is so low relative to the stock. This feature has been acquired in the course of centuries and cannot be undone anymore* (interviewee's emphasis). From my point of view, this is most important thing you have to understand as a gold investor. The stock-to-flow ratio is very important, and this is something that differentiates gold from everything else.

JB: Gold is no longer tracking oil. It is going in a different direction. Any comment on that?

Ronald Stöferle: Yes, I would have to say that this huge decline in oil prices is definitely a surprise. We can talk about the reasons for that at length. I think the fact that we're seeing this huge decline in oil prices is putting enormous deflationary pressures on the system. For example, gas prices here in Europe are really cheap, and the same of course is true in the U.S. This is not something that our finance ministers really like because taxes on gasoline are a very big source of income for the governments. So I think that I would not recommend catching the falling knife, but I think that if oil stabilizes at these prices probably there are decent risk-reward ratios.

Having a look at the gold-oil ratio, you can tell that every time it spiked up as it did quite recently, we have seen a major crisis afterwards. With only six weeks into 2015, we have already seen a few major things, like the ECB announcing massive quantitative easing, much more than the market expected. The interesting thing is that previously Draghi always under delivered. This is the first time that he did more than the market expected. Then we have seen the Swiss National Bank basically cutting the peg, so leaving the eurozone more or less. And then we are seeing the developments in Greece. Greece is not really important for the eurozone, but we are seeing the same developments in Spain, they are having elections at the end of the year, and we

are seeing it also in Italy. The spillover might be something the politicians are fearing. So it will be quite an interesting year. It will be a volatile year, and it will be quite a challenging year for asset managers and investors.

JB: We've seen three Chinese banks join the LBMA (London Bullion Market Association), which fixes the price of gold. What do you feel the significance of that event is?

Ronald Stöferle: I wrote about this at length in my last Gold Report. The Chinese are constantly diversifying out of the dollar. There are so many agreements between Russia and China and between China and emerging markets, quite recently between Russia and Argentina. There is so much going on at the moment that I think gold is only one of the things that they are focusing on quite a lot. Russia and China are both massive gold buyers. They are also big gold producers. So I think it plays a crucial role in their long-term strategies. Jim Rickards, who is also on our Advisory Board, wrote about a gold-backed ruble several years ago. Perhaps the People's Bank of China will come out this year and announce that their official reserves are not a thousand tonnes but perhaps three or four thousand tonnes, so much more. Because there is a very important IMF meeting going forward (about the reserve currency) and the Chinese want to play a bigger role, gold will be an important point to reach that goal.

So I think the fact that mostly central banks but also private people from emerging markets are accumulating gold while the best Western investors are kind of sleepy –especially the central banks, but at least they have stopped selling their gold. I think this is a very big trend. This is the so-called "love" trade. And you know we have to say that more than 70 percent of physical gold demand is coming from China and India. That's a huge number. If you would have said that ten or fifteen years ago, I think you would have been ridiculed. So there is a big change under way, but such big changes happen in slow motion and perhaps one doesn't realize it but there is a lot going on. Every day there are a few announcements that make this big picture a bit clearer.

JB: The fact that the Chinese banks are part of the LBMA may mean more transparency and the gold market may become more realistic than it has been in the past.

Ronald Stöferle: Absolutely. There is a huge difference between the physical market and the paper market. Every day there are 240 billion U.S. dollars traded in gold, mostly derivatives. So there are many theories about a possible short-squeeze. Most of those theories actually make sense but having a look at

history, the Hunt brothers [Texas oil tycoons who accumulated silver and, by 1979, had nearly cornered the silver market when prices collapsed and forced them into bankruptcy) were actually right, but then the contracts, the rules were changed, so at the end they lost.

If investors want to hold gold as a physical or monetary insurance, we recommend they buy physical gold and that they store it in a safe place outside the banking system in a safe jurisdiction. Our clients who are high net worth are talking about international diversification of their gold holdings so this subject is becoming increasingly important.

I think the Chinese banks are becoming much more important in this whole game, which clearly shows a trend change. For example, last year we saw the end of the silver fixing; we have seen changes in the participants of the gold fixing. There's a lot happening at the moment which definitely confirms our recommendations, namely that if you want to hold gold, don't buy a derivative or a certificate, buy the physical stuff. And if you want to have some leverage on the upside, but also on the downside, buy mining equities.

JB: That leads us into what you do as a firm and who your clients are. I'm assuming that your services are for accredited, exempt investors. You might describe the type of people you take care of . Also, we are asking all our interview subjects to suggest the best places for burying their "dog bones," that is, safe jurisdictions for investing.

Ronald Stöferle: Mostly it is high net worth and institutional clients. We have an absolute return approach. What we are basically doing is if we see a rising inflation rate based on our inflation model, we're piling into mining equities, gold and silver equities, commodities and energy equities. All of those asset classes are hated at the moment; nobody really likes them, especially from the mainstream. They are attractively valued, especially for the mining equities there are a lot of positive things going on. We're seeing some M&A (mergers and acquisition) activity; we have seen that many contracts were renegotiated; we are seeing the collapse in oil and energy prices. It is also clearly positive for the margins on the mining sector. But the market has not realized it yet. So therefore I am seeing a huge opportunity there, especially if and when we should see rising inflation rates. Then, I think it is just a great investment.

For high net worth individuals, we recommend Trisuna Lagerhaus AG here in Liechtenstein as one of the safest gold storage facilities in Europe.

We should not forget that no fiat currency system ever collapsed because of deflation. It's always been because of inflation. Even so, we should not

underestimate the willingness of politicians and central bankers to reflate the system. And I think the thing is the mainstream economists clearly underestimate inflation dynamics. The economy and the financial system do not work like a thermostat where if you push to the right and then the result will be 2 percent inflation and 3 percent GDP growth. It just doesn't work like that.

So I think we are already seeing rising inflation. It is particularly evident through the cantillon effect, which says that newly created money is never distributed evenly; it goes to the rich first, which then results in a growing gap between rich and poor. Of course this is a consequence of our monetary system. But we don't see any price inflation yet. So sooner or later I am absolutely certain that this will happen because of the huge debt load. Deflation would mean that the real value of debt increases, but because government, companies, and, yes, private people are nowadays so heavily in debt, it just won't be allowed to happen. And therefore going forward I think if you want to invest in inflation-sensitive assets, it's a great time now and it makes me pretty confident about our approach.

JB: Ronni, given the confluence of inflationary and deflationary forces, and the potential for a new, massive inflation, rather than the deflation everyone is expecting, can you give us some of your thoughts on Nikolai Kondratieff's long cycle theory and how it fits into the period we're in right now?

Ronald Stöferle: It is a very, very interesting topic, though I have to say that the Austrian School of Economics is very critical of Kondratieff and the idea of natural cycles in the market. Austrian Economics says that, most importantly, central bankers are creating the business cycle and, by manipulating interest rates, they are creating a cycle that is not natural.

However, I would say that based on innovations, and so on, the ideas of Kondratieff are extremely, extremely interesting and worthwhile reading, particularly if you have a look at the deflationary forces that I talked about. They would clearly say that this is the winter phase, or the downturn of the cycle because there is the need for debt liquidation. However, I would say that since the 15th of August 1971, the end of Bretton Woods, we are in a completely new monetary regime. It's a new global monetary experiment, a global fiat money currency where there is no tie to gold or anything any more. So those cycles can of course be a bit postponed, but it just means it makes it even worse. And this is why I would even say that as long as we don't have any debt liquidation, we'll continue to muddle through. That's what we are seeing at the moment.

JB: So we are extending our way into Kondratieff Winter but we haven't felt the deep freeze yet.

Ronald Stöferle: Exactly. And perhaps it is going to be an ice age! We have to put on some warm clothes and perhaps drink some gluhwein, if you know what it is.

JB: I do know the warming effect of gluhwein. A very challenging period lies ahead for all investors.

Ronald Stöferle: You know when the weather is fine and there is plenty of snow, everybody is a good skier and everybody will really look good on the slopes. But if it is foggy, if it is cold, if it is windy, if it's icy – then you really can tell who's a good skier and who's not. And I think it's the same with investment. It's extremely challenging and you won't be successful by doing the same things that you did for the last decades. Mainstream investors will really have a hard time going forward in this environment. This also makes me quite confident for our investment approach.

JB: I give you the comfort of letting you know that your words echo those of my good friend Dean LeBaron, who's been around markets for a long time. And he feels very strongly that we're going into a completely new era and one should not base one's strategy on what has worked during the past twenty, thirty years.

Ronald Stöferle: Totally agree. Absolutely.

Observations of a Dog Bone Contrarian

Whenever you find yourself on the side of the majority, it is time to pause and reflect.

–MARK TWAIN

A note from John Budden: So far, I have lived for almost a complete Kondratieff long wave cycle. I was born in 1942, towards the end of the last Kondratieff Winter. I grew up in Ottawa during the Kondratieff Spring of the current cycle that commenced post–World War II, and, by 1964, as the Kondratieff Spring was transitioning into Summer, I landed my first job as a sales trainee with Dominion Securities in London, England. Along the way, I have had the good fortune to meet some incredible investors, including my friends who kindly agreed to share their wisdom in this book.

Back in 2009, Dean LeBaron seconded me to improvise the role of Nikolai

Kondratieff at the Contrary Opinion Forum in Vergennes, Vermont. Since then, my life has never been the same. My next epiphany came in 2010 when I read Tony Boeckh's superb book *The Great Reflation*, which provided a real and balanced perspective of the challenges that lie ahead for all investors who wish to preserve their wealth and purchasing power through the current Kondratieff Winter. It was during that time, as well, that Margret Kopala, a loyal listener to CFRA's *Business at Night* and *The Budden Market Minute*, invited me to contribute to her story of the life and theories of Nikolai Kondratieff. While *The Dog Bone Portfolio* has come to fruition only because of Margret's persistence, hard work, and ongoing research, I, too, found myself undergoing an incredible learning experience. So it is with a renewed respect for Kondratieff's long wave theories combined with my years of investing "scar tissue" that I would like to offer the observations that follow.

If you see the inevitable financial storm on the horizon, don't try to determine its exact time of arrival. That's a mug's game! Central banks are orchestrating a global financial magic show, and you can go broke by being too early even when the economic indicators and market fundamentals make such an event appear imminent. As in hockey, an ongoing and strong defence will win the game.

Governments can pay off debt the old fashioned way, default on their debt, or devalue. We all know that devaluation is the method of choice for most governments, and the devaluation game is now evolving, globally.

Seasoned investors are telling us that we are entering a market environment very different from anything they have experienced in their own very successful careers. Diversification of risk into an assortment of fiscally sound and liquid shares and financial instruments is vital, along with affordable real estate, and that includes farmland and water resources for one's family and living enjoyment. Finally, with the help of really knowledgeable specialists, a component of your portfolio should be devoted to emerging and understandable technologies.

We must have core investments in our home country, including "walking around money." This should include a "side pocket" of gold bullion as insurance against the inevitable currency rainy day and resulting inflation.

With due diligence and proper guidance, you should be able to have capital managed in a prudent fashion, domestically. Do your homework to locate an advisor, the way you would if you were selecting a doctor for heart or cancer surgery. If you are not comfortable with the integrity or knowledge of the people you have hired to guide you with your investing, then "cut bait."

"Nothing is certain but death and taxes." It is mandatory to seek the advice of a Chartered Public Accountant expert in taxation matters.

Asset allocation is very personal and, naturally, depends on the variables in your life. Hopefully, after reading this book, you will be inspired to put in the time and energy required to create your very own Kontratieff Winter survival asset mix with guidance from sound and experienced investment professionals with the Chartered Financial Analyst designation and the requisite financial "scar tissue."

Finally, with regard to determining your financial destiny, one of the most important messages conveyed in *The Dog Bone Portfolio* is that, as this Kondratieff Winter heads into its final extremes, investors must get as close to their financial assets as possible. In an era of digital securities and commodities that may be linked to a quadrillion dollars of outstanding derivatives held by banks that have been prosecuted and fined, in some instances, for dubious and criminal behaviour, this will be no mean feat.

As my good friend Dean LeBaron realistically suggests, readers have a lot of work ahead of them if they want to thrive and survive during the next ten to fifteen years. I hope *The Dog Bone Portfolio* and *DogBonePortfolio.com* will prove to be useful tools in that task.

Once again and, as we say in radio…stay tuned, folks!

Signposts in the Odyssey

So finance is the wrong place to be.

–JIM ROGERS

A note from Margret Kopala: The message, with only minor variations, from John Budden and his friends was clear: the economic transition incurred during the first Kodratieff Winter of the twenty-first century will involve the wholesale debasement of major currencies. This will affect the value of stocks, bonds, real estate, and commodities. It is therefore important to lose as little money as possible. While some currencies like the Norwegian Kroner and the Singapore dollar along with the bonds of exporting countries like Australia, New Zealand, Switzerland, Canada, Denmark, and Norway, may be singled out as being relatively strong, be aware that the value of cash and bonds in even these countries and currencies could decline. In this eventuality, it is best to be invested in "real" as opposed to "paper," or financial, assets. Real assets include:

- Agricultural land that is in production in places like Brazil, Australia, Canada, and the U.S.
- Strong businesses with no debt and good cash flow.
- Energy, mining, and minerals (and the industries that turn these into goods).
- Asian stocks.
- Old-fashioned value stocks.
- Gold, because it will survive longer than paper, because it is likely to be part of the next reserve currency, and because supply (the amount in circulation or available for purchase) is contracting.

It is important for you to be able to access your investments and to have as few intermediaries as possible who could prevent your ability to do this.

Your investments should aim to achieve absolute real rates of return and be targeted for growth, survival, and liquidity. The performance of the Dow and the S&P may well be irrelevant in ten years' time.

See also Appendix E, "John Budden's Dog Bone Portfolio," the remaining *Dog Bone* chapter, and the other appendices for further investment analysis.

SEE ALSO

www.johnbudden.com for John Budden's updates to the Dog Bone Portfolio and other postings.

www.boeckhinvestmentletter.com for information regarding Tony Boeckh's services.

www.tisgroup.net for information regarding Larry Jeddeloh's services.

www.jimrogers.com for information about Jim Rogers, his books, and appearances.

www.deanlebaron.com for Dean LeBaron's latest postings and how to contact him.

American Institute for Research <http://www.air.org/contact>
for Don Lindsey's contact information.

<http://www.incrementum.li/en/ Ronald Peter Stöferle>, Incrementum AG.

www.sprottassetmanagement.com, Eric Sprott.

www.longwavegroup.com, Ian Gordon

PART 4

Recognizing the First Kondratieff Spring of the Twenty-First Century

NINE

The Next New Economy

Before and during the beginning of the rising wave, we observe the broad application of these inventions in the sphere of industrial practice due to the reorganization of production relations. The beginning of the long cycles usually coincides with an expansion of the orbit of worldwide economic relations. Finally, the beginnings of the last two cycles were preceded by major changes in the production of precious metals and in monetary circulation.

–NIKOLAI KONDRATIEFF[1]

It was fittingly symbolic when, in August 2011, Apple first overtook the behemoth oil-producing Exxon Mobil to become the world's largest corporation.[2] As John Budden noted in early 2011, with Apple worth some $337 billion compared with the Bank of America's $147 billion, Apple could buy Bank of America. In his words, today's economy is "a whole new ball game."

Incorporated in 1977, Apple arrived twenty years after the field of microelectronics was incubated in the Spring of the fourth K-wave. Later, in the 2000 dot-com bubble, the Four Horsemen of the tech world, Cisco Systems, Dell, Intel, and Microsoft, would battle it out for supremacy while Apple consolidated and changed the way we used our phones and our computers. Apple's "iproducts," along with other products of the info tech "New Economy" era, conquered distance and displaced traditional print, audio, and video services much in the way automobiles had displaced, indeed replaced, the horse and buggy. Despite microelectronics having surpassed automobiles as the largest sector of the U.S. economy by 1986,[3] Apple overtaking Exxon in 2011 would truly mark the ascent of the digital age over the oil and auto era.

It would be great to think this was a sign heralding the arrival of a Kondratieff Spring and an upswing into the fifth long wave, but such thinking

is only partially accurate. Instead, following their discovery and development phases, successful companies – like Apple, incubated in the previous Spring – emerge from bubble and depressionary economies to enter what Kondratieff scholars call the "diffusionary" or "market-saturating" phase of a particular technology's progress in the economic and social life of its times. They become, effectively, utilities in the economy that spawned them while introducing momentous social and economic change in their adoptive economies. For instance, the automobile made its real debut in the 1920s, but it was not until the '50s and '60s that its full impact was felt in the American economy as, in its secondary diffusion, it is now felt in Asian economies. Similarly, we are now bracing for the full impact of information technologies such as Google, Amazon, eBay, Skype, and Facebook, etc., as they find new users and implementations in the Middle East, Russia, China, India, Africa, South America, and all around the world.

To really appreciate info tech's "diffusionary" potential, consider how, in 2011, the U.S. used 41.38 percent of internet bandwidth while China used only 8.95 percent.[4] Or how four billion people, two thirds of the world's population, now use cellphones, which are increasingly being used to access the Internet.[5] Or how, according to Martin Cooper, who produced the first handheld phone for Motorola in 1977, "The cellphone in the long range is going to be embedded under your skin behind your ear along with a very powerful computer who is in effect your slave."[6]

In this light, the 2012 death of Steve Jobs, the marketing genius of the digital age and leader of the world's largest corporation, was more than symbolic: It was pure synchronicity. For the man who apparently died with the word "Wow!" on his lips, it was a life fully and meaningfully completed. Often compared with Henry Ford and Thomas Edison, he took a seminal discovery, developed new applications for it, and, with Apple achieving a market capitalization of $700 billion in very strong U.S. dollars by March of 2015, had led the infotech era into its market saturation depths and diffusionary heights that, according to K-wave scholarship, may not reach its peak for another twenty years. For Apple and other tech stock Horsemen survivors, this suggests a great deal of upside for many years to come.

While the diffusion of aging technologies with their profusion of new models, apps, and stock market gains will play a key role in the Kondratieff Spring, its true beginning will be heralded by the discovery and commercial worth of a new technology. The question then becomes, has that new technology arrived?

A New-Fangled Idea

Hackers are the animals that can detect a storm coming or an earthquake. They just know, even though they don't know why, and there are two big things hackers are excited about now and can't articulate why – Bitcoin and 3D printing.

–FRED EHRSAM[7]

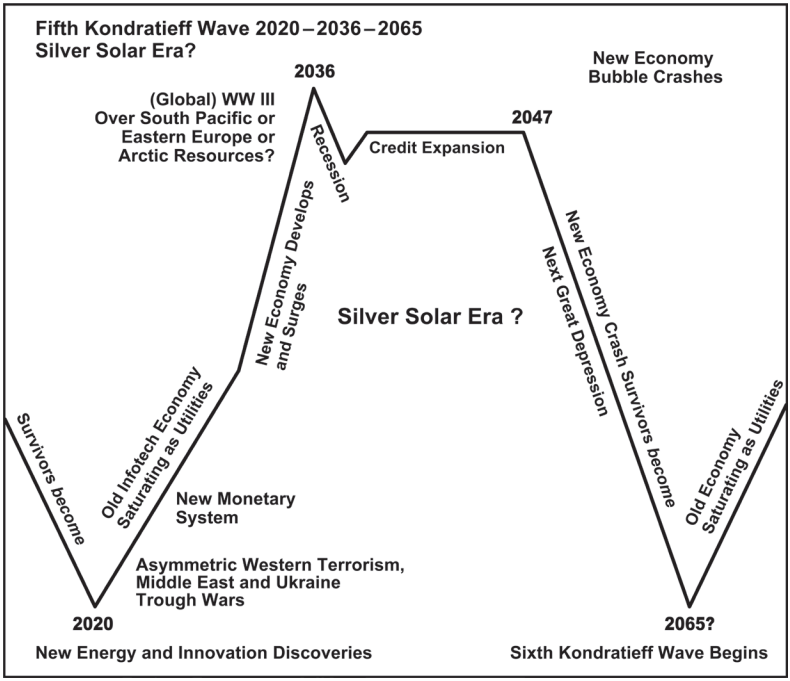


Chart of the Fifth Wave

***Key innovations**: Space Travel, Quantum Teleportation, Shale Energy, Cheap Solar and Photovoltaics, Nanotechnology, Artificial Intelligence, Bitcoin, 3D printing, Higgs Boson, Kahn Academy, Big Data, Internet of Things, Carbon Capture and Storage, Life Extension processes and products …*

Somewhere, sometime in the trough of today's Kondratieff Winter, a new-fangled idea is gurgling away that will launch the first Kondratieff Spring of the twenty-first century and the next New Economy. It will be a technological discovery that will further revolutionize a megapolitical reality and is possibly

already in play thanks to information technology. And, like information technology, it will revolutionize costs, overturn commercial patterns, and wipe out old businesses, though its full effects probably will not be felt until its diffusionary stage, that is, in the second half of the twenty-first century. A new or innovatively adapted old energy source may facilitate its use. It may transport us across short distances faster, or across long distances, such as outer space, sooner. They may, as Mad Money television host Jim Cramer suggested when he proclaimed Tesla, Netflix, Amazon, and Solarcity "the Four Horsemen of who-cares-what-price-they-are,"[8] have already arrived.

History also tells us that, when it arrives, there will be a wholesale movement of private investment into the sector, creating bubbles, graft, failures, and fraud anew but not unlike what accompanied railways, the auto sector, and info tech in their day. This time, however, we hope they will be "good" bubbles predicated not on credit expansion but on speculative risk undertaken by those who can afford it and who will perform the indispensable task of shaking out the good innovations and corporations from the bad.

With lower costs and higher efficiencies, those that survive the next bubble will have a deflationary effect on wages and prices, but also spur higher levels of productivity and increased standards of living across wider sections of the earth.[9] With more production and better wages, taxpayers will return more revenue to ailing governments. It will be creative destruction all over again.

Today, some of those technological breakthroughs are under way, and yes, as history dictates, they have something to do with conquering or even transcending distance.[10] Some may even conquer matter – that is, anything that has mass and volume. They will certainly introduce new technologies that will transform our everyday lives. Will they rate as the same kind of "general purpose technology transition," as today's economists describe it, that typified the railroad, electricity, oil, auto, and computer chip eras during previous Kondratieff Waves? According to Canadian futurist Thomas Homer Dixon, "the energy shift [alone] will dwarf all these transitions combined. It won't arise from just one disruptive technology but from an integrated suite of many such as advanced batteries, building reskinning, smart grids, cheap super-thin photovoltaic materials, ultra deep geothermal power, and perhaps thorium nuclear power. It will spur a torrent of new technologies, goods and services in every sector of the global economy."[11]

In the meantime, we will have to make do with low EROEI oil sands, shale oil, and gas – areas in which, as we have seen, new but controversial fracking techniques are unlocking reserves in North America, China, and other key

areas of the world, sufficient to secure energy supplies for the foreseeable future but at a significant cost to GDP. Of course, it is possible that, with 54 percent of U.S. manufacturers whose sales top $1 billion repatriating their factory lines from China,[12] the exports resulting from a strengthened manufacturing base might compensate for such costs. But then they may not, and we certainly shouldn't count on it. Energy independence also means a healthier current account balance from which a stronger dollar could naturally follow, particularly if U.S. debt issues were resolved sufficiently to restore investor confidence. The process is necessarily synergistic, chicken and egg, part of the "conjuncture" of events and developments. Yet, as we have learned, the shale gale is hardly reliable. To repeat from the chapter on the production crisis,

> The one clear picture that does emerge from the conflicting analyses and projections is that the energy industry is in a time of profound flux. In the short term, a recalibrated fossil-fuel industry will follow. It will feature adaptive transportation and electrical generation models, probably using the least expensive fuel for its region. These are important "technics" that will take the oil and auto era into its next diffusion. But, by themselves, these are not major innovations (hydraulic fracturing was an innovation born in the trough of the third K-wave), and we cannot rely on this model lasting past 2050. By that time, the global economy will need a plentiful supply of an environmentally acceptable and inexpensive source of energy upon which the logical innovations in transportation will be built – but their discovery and development periods must get under way now if they are to succeed. If these don't emerge, then transportation itself will become the issue, and the world will, indeed, become the much smaller place that Jeff Rubin anticipates or, worse, the no-growth picture described by Tim Morgan.

Among the renewable sources of energy, solar power gets top marks from David J.C. MacKay, Regius Professorof Engineering, Cambridge University Engineering Department. Discussing solar heaters, solar photovoltaics, and concentrating solar power, he writes:

> Solar thermal water heaters are a no-brainer. They will work almost everywhere in the world. China are world leaders in this technology. There's over 100GW of solar water heating capacity worldwide, and more than half of it is in China.
>
> Solar photovoltaics were technically feasible for Europe, but I judged

> them too expensive. I hope I'm wrong, obviously. It will be wonderful if the cost of photovoltaic power drops in the same way that the cost of computer power has dropped over the last forty years.
>
> My guess is that in many regions, the best solar technology for electricity production will be in the concentrating solar power … one billion people in Europe and North Africa could be sustained by country-sized solar power facilities in deserts near the Mediterranean … half a billion in North America could be sustained by Arizona-sized facilities in the deserts of the USA and Mexico. I'll leave it as an exercise for the reader to identify appropriate deserts to help out the other 4.5 billion people in the world.[13]

Concentrating solar power uses mirrors or lenses to focus sunlight, MacKay explains. These "stations come in several flavours, arranging their moving mirrors in various geometries, and putting various power conversion technologies at the focus – Sterling engines, pressurized water, or molten salt, for example – but they all deliver fairly similar average powers per unit area, in the ballpark of 15W/m2."[14]

Since Professor MacKay wrote the above in 2008, photovoltaics have come down in price, pv panels having fallen by 75 percent,[15] while solar panels comprise over 6 percent of China's exports to the EU and are worth some $27 billion – sufficient to have almost sparked a trade war with Germany, which also manufactures solar panels, in 2013.[16] According to one major study,[17] concentrated solar power could produce 25 percent of the world's power by 2050. Areas with high solar radiation, such as Africa, Mexico, and the American southwest, would benefit most. Prices would be drastically decreased by then, too, perhaps cheaper than coal. Desertec, a large project undertaken by German industrialists in partnership with Morocco and Algeria, is expected to serve 15 percent of Europe's power needs by 2050. Among the proposals for large-scale, gigawatt-size plants is one called Helios – to be constructed in Greece where, with cheap energy, the economy may be transformed.

Costs are dropping in other solar technologies, too. Indeed, the bankrupt Solyndra experiment in photovoltaics may be explained not as a failure of the technology but as a failure to keep up with the competition![18] After hydro and wind power, photovoltaics are the third most important global source of renewable energy. Unlike solar power, this technology converts solar radiation into direct electricity using semi-conductors like monocrystalline and polycrystalline silicon and employs solar panels that are ground-mounted or built into roofs and walls.

Cheap electricity made available to the far reaches of the world can change their productive outlook overnight. In a clear-cut example of how the Kondratieff Spring has taken hold in India, solar-powered lanterns are making night school possible for thousands of village children who must work in the fields or tend farm animals by day[19] even as mobile telephones and iPads will enable another two billion to join the internet in the next five years – a doubling of the current numbers.[20] Bulky desktop apparati may go the way of the video cassette and record players as a result. Never mind rising expectations for a higher standard of living; with millions able to access a public service like Kahn Academy, whose stated mission is to provide, through their mobile devices, "a world-class education to anyone anywhere," we can expect a whopping change in productive output as well as social relations the world over. Meanwhile, in the tropics, air conditioning makes it possible to work longer hours; central heating does the same in Arctic regions. Cheap electricity also facilitates far-ranging technological experiments in other areas requiring huge amounts of electricity such as nanotechnology, a form of molecular technology that some believe could antiquate the whole of existing technology and so create the "ultimate industrial revolution."[21] The compilation of Big Data – which allows Google to process a volume of information in a day that is one thousand times greater than the volume of printed matter in the U.S. Library of Congress or which facilitates the decoding of the human genome in a day where once it took a full decade[22] – will also benefit. And not to be forgotten, cheap electricity makes the electric car a foregone conclusion. Though this wouldn't rank as a transformative innovation – the automobile, after all, is well into its utility stage – it would be a logical diffusionary/market saturation development, the only question being how long it would take to get past its current introductory stage. The automatic transmission, for instance, was introduced before World War II but was used in only 50 percent of vehicles by the 1960s. In the oil-steeped cultures of the Americas, widespread use of electric vehicles could take some time.

Typically, science fiction writers are well ahead of the curve on future innovations. If Arthur C. Clarke (of *2002: A Space Odyssey*) and John R. Pierce (who from 1947 to 1948, was head of the team at Bell Labs that invented the transistor, the key component of modern electronics) could anticipate the use of satellite dishes and a wireless world to meet the challenge of communicating in space[23] (which they did), who can say that the world of *The Jetsons* and *Star Trek* aren't also in the future? The launch of low-cost robotic rides to the moon via Richard Branson's Moon Express Inc. in 2015 and Mars One, a $6 billion

project aiming to place a human colony on Mars by 2023, suggests Earth's rapidly depleting resources could be augmented with a rapid transit system that allows us to outsource – to space – the mining of resources, sometime during this century. We may even be able to transcend distance. Teleportation, for instance, is being researched at several centres, including IBM, which is leading in quantum teleportation.[24]

Such a future, or something entirely different but just as amazing, is made potential by nanotechnology and quantum mechanics. Thanks to Blackberry inventors Mike Lazaradis and Doug Freg, Waterloo, Canada, is at the cutting edge of this particular industrial revolution. Using quantum sensors, they plan to make *Star Trek*'s medical tricorder, a handheld device swept over the body to collect medical data, a reality.[25] But throw in a bit of Higgs Boson, the recent discovery that gives particles, which otherwise would be dust in the wind, their mass, and hence turn them into matter, and the sky really is the limit. These discoveries and their offshoots may reduce the need for or displace whole commodity sectors while facilitating processes including at the genetic level for medical as well as other purposes. Russian K-wave scholars[26] tell us this technology, along with the genomics and cell diffusion research that gave us monoclonal antibodies and cloned sheep, is now in its late development phase while quantum computers are halfway through. Given projections that global oil consumption will increase at a level of 2 percent per annum with depletion occurring in forty years, these same scholars saw the previously discarded thorium breeder reactor, hydrogen, and solar as the most viable sources of new energy. Back in 2009, they also saw oil sands and shale oil as plentiful alternatives to oil. And don't forget robotics, now very advanced, as one way of addressing demographic decline both in the provision of care for the elderly as well as replacing them in the workforce.

Reorganizing Production Relations, Monetary Circulation

A period of increased construction of these capital goods coincided with the rising wave of the long cycle, and the period of the abatement of this construction coincided with the falling wave of the long cycle.

–VINCENT BARNETT, SUMMARIZING KONDRATIEFF'S REQUIREMENTS FOR AN UPSWING[27]

Though anyone, anywhere, may invent or discover the new technology, it is the society that develops it and puts it to productive use that will be

best positioned to become the world's next system leader. Even if the innovating nation develops capacity, that does not mean it will not be overtaken. Bismarck's Germany, for instance, out-produced England in electrical, steel, and rail technology, all but assuring it of victory in WWI. American intervention prevented that outcome, but the British Empire's role as system leader ended anyway. And, as Vincent Barnett, further summarizing Kondratieff's conditions for the upswing, reveals …

> The creation of basic capital goods such as large construction projects, land improvement schemes, and the training of cadres of qualified labour demanded the outlay of huge amounts of capital which required a series of preconditions as follows: (1) a high intensity of savings; (2) relative abundance of supply of cheap loan capital; (3) the accumulation of capital in the hands of powerful financial and entrepreneurial centres; and (4) low commodity prices, which stimulated savings. The low price level which was found at the beginning of the upturn of a long cycle was accompanied by a relatively high purchasing power of gold, which acted to stimulate the mining of gold.[28]

In recent decades, the U.S. has led in innovation, but it is China that continues to be the production line for those innovations, thanks to its high rates of savings, low wages, cheap loan capital, entrepreneurial power centres, and the creation of capital goods, which have far outpaced the rest of the world. Apple, for instance, employs only 43,000 U.S. workers, one tenth of those employed by General Motors in its heyday.[29] Rather, with 700,000 workers worldwide, most of its products are manufactured in China where, as the *New York Times Magazine* reports, companies like Foxconn[30] have hundreds of thousands of employees who not only work for low wages but do so in corporate synergies that assure reliable, nimble, and inexpensive delivery modules for parts and other necessities to guarantee on-time on-budget delivery of the final product.

In other words, the reorganization of Nikolai Kondratieff's production "technics," necessary to the formation of the Spring phase of the long wave, has taken place mostly in Asia. Led by Japan, where production innovations challenged the U.S. auto industry as early as the 1970s, creating its own K-wave peak and an early trough from which it has yet to emerge, the advancement in Japanese technology and Chinese (among other Asian countries like Korea) production capacity means the West has some catching up to do.

It is no accident that Japan, along with Germany, led in manufacturing excellence through most of the fourth K-wave. In the aftermath of World War II, the need to reconstruct compelled the emergence of new economic and political models that enabled them to ride the fourth K-wave with gusto and, in Japan's case, to experience its Kondratieff Winter before other countries. The rest of the developed world, despite the emergence of the EU and globalization, remained stuck in third, albeit maturing, K-wave models and rested on their laurels. In this light, it is hardly surprising that the current K-Winter is proving so devastating and so durable as, in early 2015, the conditions for a Kondratieff Spring remained within sight but out of reach.

Of course, in the aftermath of WWII, things in the West did change. Lord Rees-Mogg and Davidson, in their third and final book, *The Sovereign Individual*, declared the end of the Industrial Age and the beginning of the Information Age with the fall of the Berlin Wall, three years after the era of microelectronics had overtaken the automobile era. At that time, computation was a factor in manufacturing, as was micro-processing in machine power, while workstations were starting to take over from the factory assembly line.[31] And, to be sure, the dynamics in both parts of the world could change. In the same way auto-making has "gone global," so, too, are its unions promising to "go global."[32] Unionization of Asia, as Karl Marx could have told us, would profoundly "rebalance" the global economy. Although today's economists adamantly insist rebalancing of the global economy is required they may not be thinking in quite these terms. In February 2012, for instance, investigations into working conditions for the production of Apple products at a Foxconn facility in China could lead to just such developments in unionization. In September, riots followed.

But then, as we have seen, Kondratieff Winters reorganize an economy with patterns of production, communication, and commerce altered and expanded beyond anything the previous era understood, much less anticipated. More inevitable than Asian unionization may be the de-unionization of the West, at least to the extent it has also been deindustrialized. As Greek public sector workers and Canadian Caterpillar workers can attest, reduced salaries and layoffs are painful experiences. These, throughout the West, will get much worse before they get better, though, conversely, unionization is growing in the area where employment is also growing, particularly in fast foods.

Reversal of globalization is also a possibility. In a globalized world, says Nobel Laureate economist Michael Spence, integrated markets use new technologies and management expertise to lower transportation and transaction

costs. But the West, and the U.S. in particular, paid the price when manufacturing jobs were lost and moved to emerging economies like China, where 7 to 10 percent annual growth has occurred. The time has come, he argues, to restore competitiveness to the U.S. economy with productivity-enhancing technology and competitive wage levels.[33] Tim Morgan, British economist and former Global head of Research at Tullett Prebon, leaves no doubt about the devastating effects of globalization. The compounding mistake, he writes,

> … where the Western countries were concerned, was a wide-eyed belief that "globalisation" would make everyone richer, when the reality was that the outsourcing of production to emerging economies was a self-inflicted disaster with few parallels in economic history. One would have to look back to a Spanish empire awash with bullion from the New World to find a combination of economic idiocy and minority self-interest equal to the folly of globalization.
>
> The big problem with globalisation was that Western countries reduced their production without making corresponding reductions in their consumption. Corporations' outsourcing of production to emerging economies boosted their earnings (and, consequently, the incomes of the minority at the very top) whilst hollowing out their domestic economies through the export of skilled jobs.[34]

Other economists, like American David Hale, demonstrate that deglobalization is already happening given that eight million jobs lost since 2008 were translated into productivity gains of 4 percent in 2009 and at an "8 percent annual rate during the third quarter of the (2011) year."[35] Productivity gains – which measure output per worker – like these, Hale argues, combined with a cheaper dollar should trigger an export boom. Others critics, like Carl Pope, former chairman of the Sierra Club, argue that the world's pre-eminent manufacturing economies, Japan and Germany, are also high-wage economies, so high wages alone aren't the problem, though these countries merely confirm that high wages follow in the wake of good production technics. According to Spence, "The goal must be to create capital-intensive jobs that have labor-productivity levels consistent with advanced-country incomes."[36]

To be sure, there are signs this is under way in America. "Insourcing" is the new buzzword as manufacturers like GE, which had 23,000 employees in 1973, saw those numbers reduced to fewer than 16,000 by 1984 and, by 2011, to 1,863. Yet, in early 2013, a refurbished GE was gearing up its three assembly lines in Appliance Park to resume the production of the everyday

appliances (and parts) that made it yesteryear's household name. Why? As Jeff Rubin anticipated, a rise in oil prices has increased costs of shipping such goods from Asia, while the natural gas boom has lowered energy and, therefore, factory overhead costs in the U.S. Similarly, Chinese wages have risen by five times since 2000, while American unions, despite widespread protest over "right to work" legislation that prohibits mandatory payment of union dues, are on their way to becoming more competitive, at least in the twenty-four states where such legislation is under way.[37]

Such developments prompt a "thumbs up" from Citigroup economist Willem Buiter for a U.S. recovery, but he sees little but stagnation and decline for the eurozone. With the U.S. at +2.2 percent growth in 2012, and eurozone growth at -0.4 percent, the gap between the two is the biggest since 1993.[38] Other signs for the U.S. are encouraging also. Some argue 3D printing may just be the disruptive catalyst needed to revolutionize manufacturing as this technology makes it possible for a person to design and create any manner of goods on a computer, including human prostheses. It will, according to Allister Heath in *The Telegraph*,[39] democratize manufacturing and turn large chunks of the global economy upside down. Why? Because it will do to manufacturing what digitization has done to the printing press, the music industry, and multi-channel TV. Where the industrial revolution created mass-produced goods in cheap locations, 3D printing allows anyone to customize any order on demand, either producing it themselves on a purchased printer or sending it to a specialty firm to produce. Or, as Andrew Cates of the Swiss financial services giant UBS describes it, while conventional "subtractive" manufacturing techniques involve cutting blocks of material into the right shape and assembling them into complex products, "additive manufacturing (AM) techniques (a.k.a. 3D printing) create 3D objects directly from a computer model by depositing material where required and by building products up layer by layer using a range of different materials (i.e. polymers, ceramics, glass and even metal)."[40] Where 3D printing gets really interesting is when it is married with other disruptive technologies. Combined with nanotechnology, for instance, 3D-printed plastics could rival metals in conventional manufacturing for sheer strength even as the printing of human kidneys and other items in the medical-dental and food processing industries are now undergoing active use and research. Energy will be saved because products will be lighter and easier to transport over smaller distances and the capital base and productivity will be enhanced, with new markets and improved profitability the result. Most of all, and like Allister Heath, Cates argues that 3D

printing, by lowering the barrier to manufacturing, allows anyone to become an entrepreneur (in effect democratizing it). Heath concludes that economies of scale will be obsolete and manufacturing jobs will be reshored to the West as machines outprice Asian labour.

The McKinsey Global Institute says[41] that 3D Printing is just one of several technologies that will transform life, business, and the global economy, including cloud technology (computer hardware and software resources delivered over a network or the internet), advanced robotics, autonomous and near-autonomous vehicles, energy storage, advanced oil and gas exploration, and recovery and renewable energy.

Once again, how we live and how we work will be affected and, once again, the Luddites will not be happy. In the same way that the cloth workers of Leeds were outworked and outpriced by the loom, today's labourers and the highly educated alike will face new challenges. Many of the technologies cited by McKinsey may replace jobs currently done by college graduates. This suggests, nay, demands, a whole rethinking of labour force dynamics.

Even so, many governments are importing low-wage labour in the hope of remaining competitive. But, by relieving industry and unions of the need to recapitalize, retool, and upgrade their technics, such governments may, instead, be keeping their corporations and labour pool down on the farm while creating costly social and fiscal issues, even though social cohesion, as Japan's earthquake response demonstrates, along with solvency, may be a nation's two most valuable assets. The goal, clearly, must be healthy, not large, economies with sufficient diversity to prevent social stagnation while maintaining the social cohesion manifestly able to withstand geophysical, geopolitical, and economic tempests.

One way or the other, how we produce goods and services will change. Technological innovation, along with the formation of new production and marketing techniques, is the first requirement of a K-wave upswing – the Kondratieff Spring. Innovatively applied energy sources, either new or old, will accompany this process. Together, they are a nation's primary determinants of productive capacity, which in turn, promotes investor confidence and the profitable production, employment, and tax revenues that will finally, in an economically healthy way, rescue the global economy. As John Budden and his friends have advised, two criteria for choosing where to invest your assets are low-debt levels and plentiful resources – productivity levels and per capita GDP must also be another.

That productive capacity and investor confidence can be undermined

by monetary ineptitude or unaccommodative demographics goes without saying. In April 2012, *The Atlantic* ran a cover story declaring Federal Reserve Board chairman Ben Bernanke "The Hero."[42] A consensus was emerging that the quantity of money, some $2.9 trillion on the Federal Reserve Board's sheet, $1.5 trillion in excess reserves alone – which banks aren't using since loan demand is very low – had "saved" the global economy from a second Great Depression. The release of such sums, despite their failure to reach into the real economy, suggests Kondratieff's requirement that a major change in monetary circulation accompany the upswing. Concerns remain, however, about whether they have the potential to create inflation or even hyperinflation, a subject that is discussed in the appendix on Black Swans, or whether, as James Rickards argues, the velocity of the money is too low to have any meaningful impact on the economy. Given how the Great Depression experienced many "false dawns" before 1937, when another major recession, then a major war, arrived to complete the cycle, and that Japan's lost years extended over two decades, it is clearly premature, in 2013, to declare any kind of victory. In any case, expansion of the money supply comes nowhere near the major monetary reforms and/or creation of the new International Monetary Systems that accompanied previous upswings. And, indeed, the question facing all economies is whether or not a Kondratieff Spring is even possible in the foreseeable future, in Western or Eastern nations, given crushing levels of debt, toxic levels of derivatives infecting the global financial system, and demographic decline.

Debt by Demographics

The Lewis Point, named after St. Lucia's Nobel economist Sir Arthur Lewis, is when the supply of workers dries up and city wages soar. It is when labour turns the tables on capital, and profits crash.

–AMBROSE EVANS-PRITCHARD[43]

Falling fertility rates have effectively negated the dire predictions of the 1970s that anticipated mass starvation as the inevitable result of an all but unstoppable population bomb. It is as if people listened to the warnings about resource and job depletion, so they stopped having babies. Not only that, but global output increased to meet rising demands.[44] Today, with the notable exception of the U.S., not only has the population bomb not arrived, with most countries not meeting replacement levels of 2.2 children, but also, as the online columnist "Spengler" (David Goldman) hypothesizes, these

greying, contracting populations are largely those that owe their democracy to American intervention. Notably, the number of living Germans will halve by the end of the century, as will the number of Japanese, with three fifths of them over sixty years of age.

Goldman cites the Dresden firestorm and nuclear attacks on Nagasaki and Hiroshima in 1945 and notes that those who are culturally humiliated or otherwise lose faith in the future do not breed. "It appears that Germans and Japanese don't breed in captivity. Having lost their Christianity to nationalism, and lost their nationalism to losing, the Europeans do not appear to want to be much of anything. Although the U.S. judiciously kept Japan's Emperor on the Chrysanthemum Throne, the Japanese have lost almost all connection to the Buddhist and Shinto religion of their past."[45]

Globally, eighteen countries have contracting populations and, by 2050, forty-four, mostly in Europe, will be contracting.[46] Some, such as Ukraine, Georgia, Belarus, and Moldova, with populations that will almost halve by 2050, of which another half will be elderly, are in terminal decline,[47] making national existence unsustainable. Japan and South Korea are not far behind. In the Muslim world, where, according to Goldman, fertility is falling at an even faster rate, "the Islamic world will have the same proportion of dependent elderly as the industrialized world but one-tenth the productivity."[48]

By 2050, according to the United Nations Population Division, global population growth will halt, stabilizing at 9.15 billion people, up from 6.83 in 2011.

"The coming transformation is both certain and lasting," write Richard Jackson and Neil Howe in *The Graying of the Great Powers*. "There is almost no chance that it will not happen – or that it will be reversed in our lifetime."[49] How do we know? Because in 2050, anyone over the age of forty-five has already been born and can therefore be counted today. Barring a major catastrophe, population growth cannot be speeded up or slowed down, they say. Even China will not be immune as its one-child policy, one that is almost certainly to be reconsidered, places the welfare costs of two parents and four grandparents on a single wage earner. This will result in a developed nation's level of old-age dependency having a developing nation's income. In the developed world, global aging will hit hardest in the 2020s.[50] This is when a critical mass of baby boomers will be in retirement, causing the ratio of elderly to working-age adults to surge. By 2050, about 30 percent of North Americans, Chinese, and Europeans will be over sixty, as will 40 percent of Japanese and

South Koreans.[51] Overall, the world's population will decline by 20 percent by the end of the twenty-first century, the worst ever decline in human history.[52]

The effects of this transformation to an aging population will also be certain and lasting, including a 25 percent drop in the demographic weight of the developed world, thus shifting economic power to the developing world. Left with an increasing age dependency ratio, there will be a decline in economic growth, innovation, and military strength in developed nations, even as most of the world's population becomes urbanized, often in the world's poorest countries where policing, sanitation, and health care are in limited supply.[53]

For investors, it is important to remember that old people don't spend money. At least that is the stark message delivered by Harry S. Dent, prolific author and analyst of economic trends based on consumer spending habits. Spending, though minimal among young adults, rises in their child-rearing years, peaks when children leave home, then declines as saving for retirement and finally retirement itself take over. Just how many Porsches or Rolex watches does the average seventy-year-old buy? For that matter, how many washing machines, sofas, or coffeemakers do they purchase?[54] A decade-long lull in consumer spending is all but inevitable, Dent predicts, no matter what incentives to expanding Keynes's vaunted "aggregate demand" governments and central bankers contrive. Endless quantitative easing may keep bankers and the stock market happy, at least in the short term, but consumers, particularly elderly consumers, will not be borrowing, nor will they be consuming. If anything, they, along with everyone else, will be paying down debt. That's what happened in Japan[55] and that's what will happen in America and Europe now.

Moreover, old people cost taxpayers money. A study done by former governor of the Bank of Canada David Dodge demonstrated that, in Canada, with a health-care system of low to middling efficiency, people aged sixty cost the system $4,000 a year and, by the time they are eighty, they cost the system $20,000 a year.[56] And that's before counting the Old Age Security and public pension benefits they receive. Today, elderly Canadians are 12 percent of the population; by 2030 they will be 25 percent, and the working population will be reduced accordingly. Badly conceived mass immigration policies that emphasize family reunification rather than skilled workers are pretty well the norm today in Western economies and will do nothing to offset these effects. To the contrary, with one of the highest rates of per capita immigration in the world, immigrants are costing Canadian taxpayers between $16.3 billion and $23.6 billion a year in services beyond the amount they pay in taxes.[57] To be

sure, governments will continue efforts to reflate their economies with lower interest rates and higher rates of money printing and immigration to spur their housing industries and sagging GDPs, but we saw how that movie played out in 2007 and 2008. The U.S., Spain, and Ireland demonstrated only too vividly that production capacity, that is, high output and GDP numbers, can treacherously mask other weaknesses in the economy.

According to George Magnus, author of *The Age of Aging*, the kinds of costs being incurred throughout the developed nations associated with an aging population guarantee an explosion of structural, age-related liabilities. In 2050, such costs will comprise 600 percent of GDP in Spain and Greece, 500 percent of U.S. GDP, and 335 percent of U.K. GDP. These demands will dwarf the costs of the 2008 banking crisis. The biggest risk, he affirms, is deflation – a shortage of aggregate demand, which is what defines deflation. Gone are the halcyon days of equity and real estate appreciation spurred by baby boomers entering the labour force, a trend reinforced in a September 2012, article in *The Atlantic*, which pointed out that the millennial generation is interested neither in cars nor home ownership, preferring instead dense, highly connected urban living.[58] Publication of new research in the same month from economists Karl Kase, Anne Thompson, and Robert Shiller confirmed that, while short-term indicators for the housing market appear positive, for the long term they are weakening.[59] Magnus concludes that emerging market demand for infrastructure and capital, rather than equity and real estate, promises the greatest returns for today's investors,[60] but if Millennial generation trends persist, nothing less than a New Economy, predicated on something other than housing starts and automobile sales, may be necessary for the West.

A paper by Société Générale expands this theme and places it in a Kondratieff perspective. It maintains that the rise in the working-age population in Southeast Asia over the last fifteen years, along with liberalized trade, has encouraged its production capabilities and a disinflationary (cheap goods) environment, along with low interest rates, a credit boom, and appetite for risky financials assets. This "supply driven" world is about to change to a "demand driven" world as vast numbers of southeast Asians, the Chinese particularly, enter the middle classes and demand all its accoutrements. This, in turn, will produce a profound shift in the world's production and labour balance and a radical change in its economic model, comparable with the (much smaller) shift in Europe a century ago.[61]

No kidding. Today the difference in the per capita consumption ratio between the most advanced developed and least advanced undeveloped

nation is a staggering 32:1. And just as their economic growths are diverging, their per capita incomes are converging. According to University of California geographer and author Professor Jared Diamond, achieving levels of consumption among the undeveloped nations comparable with those of the developed nations will create demand equivalent to a population of seventy-two billion people on the planet, not today's six billion. This convergence is all but assured as the information revolution works its way through the undeveloped nations. What author and journalist Chrystia Freeland has dubbed as "the Apple Economy" is awakening the world to the potential for jobs and a better life, thereby accelerating the process of convergence. The strain on resources will be enormous;[62] indeed it already is.

But just how long will this demand for resources last? According to the International Monetary Fund, not very long at all. Seven years, or so, in 2020, is when the sun could set on the Asian growth miracle, as well as its demand for coal, for crude, for copper, and for all manner of imported Western goodies. Why? That's when China's working-age population goes into precipitous decline, the IMF reports. The aging crisis arrived in Japan around the year 2000, and it is starting now in China as vast numbers of employment-seeking peasants, having peaked in 2010 after China's massive drive to urbanize, are collapsing with any remaining surplus bound to disappear after 2020. After that, says the IMF, labour shortages could reach 140 million workers. A change in the one-child policy is one obvious answer, but even if an educated, middle class Chinese couple wanted a large family (in the West most such couples don't), half a century would be needed to reverse the demographics.[63]

So Western economies depending on the Chinese growth story may well be in for a rude shock. Indeed, even if the various crises plaguing the global economy are addressed, assuming that the world will look and function as it does now hardly seems realistic.

Sovereign Individuals and Virtual Nations

The proprietor of land is necessarily a citizen of the particular country in which his estate lies. The proprietor of stock is properly a citizen of the world, and is not necessarily attached to any particular country.

–ADAM SMITH[64]

The great reckoning envisaged by Lord Rees-Mogg and Davidson in their 1993 book of the same name arrived in 2008. Given the accuracy of their predictions and, more importantly, the accuracy of their analysis of how it would

come about and why, it behooves us to consider what they forecast as its likely aftermath. This is spelled out very clearly in their third and final book written together in 1997, *The Sovereign Individual*, whose central thesis I paraphrase below.

The major casualty of this credit crisis and stock market crash, *The Sovereign Individual* argues, will be nothing less than the end of the twentieth-century nation state. It will starve to death as tax revenues decline and governments use increasingly desperate measures, such as printing money, to keep their economies going. Not only that but, like the church under the Borgias at the twilight of the Middle Ages, today's overbureaucratized, bankrupt, corrupt, and debauched nation state (think Berlusconi's Italy) is a drag on growth and productivity. In the same way that the printing press destroyed the monopoly of the medieval Church and laid the foundation for the Industrial Age and the rise of the nation state, technology will destroy the nation state giving rise to new forms of sovereignty, perhaps resembling city states or a mix of different jurisdictions, all competing for income. Similarly, in the way chivalry gave way to citizenship, citizens will give way to customers. In this digitized, but jobless, Information Age, per capita GDP will nonetheless increase tenfold by 2100, while growing numbers of a wealthy, cognitive elite shop for jurisdictions amenable to investment and willing to contract for specific services such as police and military protection. With encrypted, mobile accounts, this cognitive elite, perhaps as many as 500 million by the end of the century, will be beyond the reach of predatory, tax grabbing, inflating governments caught in the nation state's death throes.

The nation state, the natural outcome of an industrializing world, has been history's most successful instrument for seizing resources by extracting the wealth of citizens, now substituting nationalism for religion. Democracy, *The Sovereign Individual* explains, is the fraternal twin of communism because both commandeer the resources of the state. Democracy proved superior only because it was compatible with private ownership and capitalist productivity, thus producing more resources for the state than communism. But the Information Age is replacing mass production, and, along with it, mass democracy will suffer as well. Unless our social arrangements and institutions, including both parliamentary and presidential systems of governance where geographically based constituencies overrepresent the vested interests of industrial-era enterprises, are fundamentally realigned, democracy will go the way of communism. And the end will not be pretty, as it is always accompanied by intense corruption and violence. "Before most nation-states collapse,

they will be dominated by latter-day barbarians … (as) drug cartels, gangs, mafias, and triads of various sorts (proliferate) around the world … financing civil wars and insurgencies, … merging with commercial structures, administrative agencies, interior ministry bodies, city authorities … creating narco republics …"[65]

In other words, a new Dark Ages may prevail before we get anywhere near a Kondratieff Spring. In 2012, with Mexico in the grip of drug cartels and Greece on technocratic life support, at least two nation states would seem to be imperilled (though in the case of Mexico, cheap energy resources, access to the U.S. market, and a debt to GDP of 43 percent[66] may yet redeem it). Though a familiar dynamic in the undeveloped world, for the first time it is appearing in the backyards of the developed world. To any other country headed down these paths in 2012, notice has been served.

Another chilling sign of a new Dark Ages would be the unfettered powers of the cyber giants – invasion of privacy issues (governments tracking your interests, purchasing habits, and treasonous activities via your computer and cellphone) may be the least of our worries. Ultimately, the cyber giants may be able to control whole economies and even wage war in space. After all, who can doubt that anything the Pentagon can do in cyberspace, Microsoft can do as well? So far, Google and Apple are benign geniuses, but what if the next cyber giant isn't so benign? What might a cyber war mean for the future of stored information, e-books, data, and access to our brokerage and bank accounts? If we returned to a feudal system, who, this time, would command the great armies and save the books?

One thing is certain: The cognitive elite are already among us. Chrystia Freeland's book *Plutocrats: The Rise of the New Global Super-Rich and the Fall of Everyone Else*[67] describes how, at the beginning of the twenty-first century, this elite is entrenching itself. With 29.6 million millionaires in the world in 2012,[68] 1,226 of them billionaires,[69] the prediction of 500 million millionaires by the end of the century by Davidson and Rees-Mogg hardly seems far-fetched. Whether Asian, Russian, or American, most sport advanced degrees in math and physics, send their children to British public schools and American Ivy League colleges, and frequent the same high-end international hotels and events. Wall Street hedge-fund and private-equity managers are most conspicuously represented in this "triumph of the nerds," as are the West Coast technorati and the oligarchs of Russia, China, and India. One factor in the creation of this super elite, writes Freeland, is their ability to "spot paradigm shifts and adapt."[70]

More benign, but still wrenching, signs of the nation state under stress are the many nascent separatist movements lurking in the world. Recessionary times re-awakened the secessionary zeal of Quebec separatists in Canada and fuelled the secessionary zeal of Scottish nationalists in the U.K. as well as that of Catalans and Basques in Spain. Like the eurozone's PIIGS, Canada's two largest provinces, Quebec and Ontario, might benefit from dollar devaluation, though, so far, and unlike European secessionists, neither is considering adopting its own currency.

And all that is before what, at the supranational level, is nibbling away at the sovereignty of the nation state, even as diasporic entities in the form of mass movements of people on the prowl for maximum opportunities with one foot in their homeland, gnaw away at its innards.

In concert with the needs of a globalized world, the roles of institutions like the IMF, World Bank, United Nations, the G20, and the EU, which were created after World War II, are expanding, requiring even greater powers, including, some believe, the power to tax all international capital flows, standardize banking rules, and accommodate all manner of mass migration, even though, as Milton Friedman famously observed, the welfare state and mass migration are "incompatible."

One way or another, then, whether from above or from below, the state of the nation state will change, indeed, is changing. But then another sign of the Kondratieff Spring is political reorganization. K-wave scholars tend to view this in terms of liberal and conservative swings within the nation state, but the end of fourth K-wave and the beginning of the fifth suggest deeper changes are possible. At the macro level, the need (and the greatest likelihood) for this to happen is most evident in the eurozone where questions about movement to a full fiscal union or some kind of reconfiguration remain unanswered in 2013, but are nonetheless under consideration. Similarly the Chinese must address fundamental issues of democratic governance, adherence to the rule of law, and human rights abuses before the world will accept and trust it as an equal global player. In the meantime, problems in the eurozone, not to mention shifting energy supply patterns, may discourage further discussions about North American integration, a common currency, and the like, which have been under way since 9/11, and which saw the eurozone as a possible model.[71] This would not preclude changes at the institutional level in each country, however, even those requiring constitutional assemblies.

Here, Greece may yet serve as a positive model, if only in its ancient configuration. The Davidson-Rees-Mogg prescription for a reversion to the ancient

Greek model of random selection or "sortition" of citizens who would serve for a fixed term, much like a jury does today, may answer the overwhelming consensus for an electoral system that removes election financing and the plying of influence, geographic or financial, such as that exhibited by Wall Street on Capitol Hill over the years. This issue is so important that one theorist on institutional economics, Mancur Olsen, has argued that "nations decline because of the lobbying power of distributional coalitions, or special interest groups whose growing influence fosters economic inefficiency and inequality."[72]

Rule by a genuine citizens assembly serving for only one extended term could, ostensibly, avoid this problem and genuinely act in the nation's interests. Unfortunately, countries like Canada, Australia, and even Britain, which might otherwise be in the vanguard of such movements, are instead moving towards, or have already de facto adopted, the often dysfunctional presidential system by electing its upper house. Additionally, given these two "colonial siblings," as Canadian commentator Matthew Fisher calls them,[73] are performing so well in the current Kondratieff Winter, suggests that, rather than a devolution to micro-states as Davidson and Rees-Mogg predict, or some form of transnational governance as Michael Spence suggests is necessary, a digitized world makes the bilateral creation of a virtual nation, even one whose constituent parts are on opposite sides of the globe, equally possible. And that's before taking into account Larry Jeddeloh's prediction that the multinational corporations, many of whose bond issuances are more attractive than those of sovereign nations, may themselves take on some of the attributes of nationhood. Indeed, the process seems to be under way. According to a House of Lords study, the multinationals are effectively gaming the system to get around the nation state. Google, for instance, generated £11.8 billion in U.K. revenue between 2006 and 2011 but paid only £16 million in corporations tax. These "vast and rapacious companies," as former editor of *The Scotsman* and former deputy editor of *The Sunday Telegraph*, Iain Martin describes them, "often act as though they are bigger than their host governments. And then there are the enormous banks – such as Barclays, which was in trouble this week – which actually are much bigger than the state. Even after the financial crisis, the UK's five clearing banks have combined balance sheets of almost 400 per cent of GDP."[74] Worse, Martin writes, whenever these globalized experiments go wrong, "the burden of averting anarchy falls back on the nation state and its taxpayers. It will be exactly the same if the internet ever freezes in some unforeseeable manner, or transcontinental energy infrastructure is blown up by the next generation of terrorists."[75]

By now it was becoming crystal clear to me that if the nation state is to survive as an organizing principle, it had to meet the following tests: production capacity, institutional coherence, an informed citizenry, social cohesion, ecological development, sound money, plus energy, food and military security. By these metrics, how does your nation score?

A Central Bank Reform

Eventually the ECB will have to suck up this volcano of euros by selling back the bonds it has accumulated. If it cannot – if the bonds have defaulted, or if selling them will drive up interest rates … – then the ECB will need massive funds from German taxpayers to prevent a large euro inflation.

–JOHN COCHRANE[76]

That the post-1970s American economy was brought to the edge of ruin in 2008 goes without further saying. Not that a Kondratieff Winter could have been avoided. It could not. The only question is how manageable it might otherwise have been and how much worse will it get. Though many "blame" central bankers (looking for scapegoats is a feature of depressions), the fact is, they are only one of the many important players in the drama. To be sure, to have control of the money supply and interest rates is to be equipped with powerful tools. Their deployment can lengthen or shorten a K-season or mitigate (or enhance) its worst (and best) effects. In both respects, some central bankers play the part better than others. Notably, Alan Greenspan extended the Autumn of the fourth K-wave, while today's central bankers, so far avoiding catastrophe, are extending its Winter, a concern that Fed chairman and the FOMC committee perhaps hopes will be addressed by his tapering of quantitative easing.

As much as everyone loves to hate their central banker, the bottom line is that no central banker forces anyone to borrow or to invest money. Indeed, the conscientious ones, like Ben Bernanke, admit readily that savers suffer under a low interest rate regime that is designed to reduce unemployment – the higher priority. Even so, the institution, like so much else in a Kondratieff Winter, is undergoing harsh scrutiny. This is as it should be. Never mind being an investor (and if you are in a pension plan, you are an investor whether or not you know it), as citizens we are affected and should be concerned about the purchasing power of our currency. The best test of whether we are in inflationary or deflationary times is finally ourselves. Are we buying things earlier than planned because we fear prices will rise? That's an inflationary

environment. Are we delaying purchases of things we need because we believe their prices will decline? That's deflation.

As to its role in formulating and deploying monetary policy, the debate about the state of the central bank, with its traditional role and main tool being the purchase of short-term Treasury debt, and short-term lending to banks through "open-market" operations, was, by mid 2012, well and truly under way. In its opening salvo, the 2012 annual report of the Bank for International Settlements argued "there are clear limits to what central banks can do. They cannot repair balance sheets. They cannot increase productivity. And they cannot put policy on a sustainable path." They had effectively done all they could do, and now it was up to other policy-makers.[77] *The Economist* answered back by pointing out that central bankers have a phenomenal amount of power and untrammelled control over the unit of exchange and over the demand side of the economy. Using that power to "influence budget decisions or labour market regulations and the benefit structures of old-age pensions is wildly outside the purview of the central bank and sure to prove corrosive to the independence of the central bank and the democratic process."[78]

John Cochrane, a professor of finance at the Booth School of Business, University of Chicago, effectively concurred with *The Economist* and supplied the forensic details. Since the 2008 financial crisis, non-traditional interventions by the Fed included commercial paper, mortgages, and long-term Treasury debt. "At the height of the crisis, the Federal Reserve lent directly to teetering nonbank institutions, such as insurance giant AIG, and participated in several shotgun marriages, most notably between Bank of America and Merrill Lynch … These 'nontraditional' interventions are not going away anytime soon … but the Fed has crossed a bright line. Open-market operations do not have direct fiscal consequences, or directly allocate credit. That was the price of the Fed's independence, allowing it to do one thing – conduct monetary policy – without short-term political pressure. But an agency that allocates credit to specific markets and institutions, or buys assets that expose taxpayers to risks, cannot stay independent of elected, and accountable, officials."[79]

Now, Cochrane continued, the Fed not only has become financial regulator, creating "stress-tests" for "too big to fail" banks, but has commanded banks to provide $25 billion in "mortgage relief," and money to "nonprofit housing counseling organizations" – actions that are the province of the executive branch and Congress.

> This is not a criticism of personalities. It is the inevitable result of investing vast discretionary power in a single institution, expecting it to guide the economy, determine the price level, regulate banks, and direct the financial system. The European Central Bank's political power is, paradoxically, even greater. The ECB was set up to do less – price stability is its only mandate, and it is not a financial regulator. But the ECB holds the key to the eurozone's central fiscal-policy question. It has bought the debts of Greece, Italy, Spain, and Portugal and it is lending hundreds of billions of euros to banks, which, in turn, buy more of those sovereign debts. Eventually the ECB will have to suck up this volcano of euros by selling back the bonds it has accumulated. If it cannot – if the bonds have defaulted, or if selling them will drive up interest rates more than the ECB wishes to accept – then the ECB will need massive funds from German taxpayers to prevent a large euro inflation.[80]

If we don't like this sort of outcome, we have to break up the Fed into smaller agencies with narrowly defined mandates, Cochrane concludes. "Our views of central banks have changed every generation or so for centuries … It's happening again, and it would be better to think clearly about what we want central banks to do ahead of time."[81]

A few weeks after Professor Cochrane's piece appeared, an article by Lord Turner, executive chairman of the Financial Services Authority, a committee under the aegis of the Financial Stability Board concerned with building a more stable banking system, reprised the theme and, this time, placed a forensic lens on the shadow banking system. The stress in 2007 arose in hedge funds (that is, pooled investments of high-net-worth individuals managed to hedge downside risks while maximizing returns through a variety of strategies including long, short, and derivatives positions),[82] rather than bank balance sheets themselves, he explained. "Bear Stearns and Lehman Brothers – key failures along the road to crisis – were not banks, but broker-dealers. AIG was an insurance company."[83] In the summer of 2008, it was money market funds, and, by autumn, a liquidity run in secured lending markets and in unsecured deposits. The shadow banking system, therefore, also needs scrutiny, but this will be difficult because of its size and complexity. Moreover, measuring it is very difficult. In 2008, it could have been anywhere from $15 trillion to $25 trillion. On a stand-alone basis, the risks in the shadow banking system are perilous enough. "But they can be even more pernicious if shadow banking is separate enough to escape regulatory control, yet sufficiently interlinked with the formal banking system to transmit risks into it."[84]

With all credit to Lord Turner, this appears to be an oblique reference to the derivatives clogging the global and shadow banking systems, which are, so far as I can make out, preventing meaningful reform, including – and most particularly – the downsizing of "too big to fail" banks. Reform at this level would mean purging these derivatives from the system, thereby threatening its ultimate collapse – a risk regulators understandably wish to avoid. Our policy-makers have their work cut out for them, and it is beyond mere "deleveraging" even before any consideration of how central banks may have inserted themselves into the stock market. A report, released in January 2010, by the respected financial markets research firm Trim Tabs, could find no logical explanation for the stock market surge in 2009. Admitting they had no evidence, the organization nonetheless suggested the Federal Reserve was responsible.[85] Similar allegations resurfaced in 2013, again from Charles Biderman of Trim Tabs, who suggested that, of the $4 billion daily purchases of mortgage bonds and long-term Treasury bonds, about a billion ends up in the stock market through the major trading houses from which such purchases are made![86] By April 2013, *Bloomberg News* confirmed that, while the Fed did not have a mandate to purchase stocks directly, many central banks did, including the Bank of Japan, the Bank of Israel, and the Swiss and Czech central banks, and that they were indeed purchasing stocks.[87]

Clearly, there can be no convincing Kondratieff Spring without a clear and effective response to the mess in the banking and shadow banking sectors and an overhaul of central bank mandates.

All told, then, resolution of systemic debt and toxic assets; constructive movement towards a new international monetary system; and central bank mandates; along with innovations, the development of inexpensive sources of energy, and reorganization of production technics, are necessary before a full Kondratieff Spring is possible. In 2011, Mark Carney, Canada's then governor of the Bank of Canada, and chairman of the Financial Stability Board, referring to the dysfunctional hybrid mix of fixed and floating foreign exchange regimes, called for nothing less than a "refounding of the international monetary system,"[88]while, the same year, George Soros hosted a conference at Bretton Woods to help get the process under way. Such initiatives may yet succeed and, when they do, the Spring of the fifth Kondratieff Wave will be truly under way. But as the foregoing demonstrates, the road they must travel is precarious indeed.

I devote no space to the manner in which Kondratieff's requirement for an "expansion of the orbit of worldwide economic relations" save to say this

is clearly under way as countries like Canada and the U.S. negotiate free trade agreements in Latin America, Europe, and the Asia Pacific regions while the BRICs establish their own Development Bank to facilitate trade between and among themselves with China and Russia in particular expanding the Shanghai Free Trade Zone. Even Cuba, in 2014, opened its doors to foreign investment. That said, Jeremy Warner, in a short blog for *The Telegraph* in 2014 looks at developments that suggest globalization may be ending. According to WTO figures, global GDP and export growth peaked in the 1960s, then declined in the '70s and '80s. After some improvement in export growth but none in GDP in the following twenty years, the years 2008 to 2012 saw GDP and export growth at their lowest levels for the period. Not surprisingly, such figures are consistent with the trajectory of the fourth Kondratieff Wave, and, though we should expect expansion in both areas once the Kondatrieff Spring arrives, Warner argues that where growth in trade was fuelled by the opening of economies of, particularly, China and the former Soviet Union, along with efficiencies created by containerisation and internet communications, today China's economy is becoming less resource intensive while wage homogenization, robotics, and 3D printing render local production more competitive. So far, no brazen attempts at protectionism have taken place, though backdoor measures such as subsidies, restrictions, and bans are often in full play.[89]

An increase in gold production is the last Kondratieff requirement for the commencement of the Kondratieff Spring. I devote appendix B to this and other gold-related questions.

The Last Capitalist

Aitken was a capitalist in the classical meaning of the word … that is he emphasized reinvestment far more than consumption, and he found in profit the ultimate yardstick of success.

–GREGORY P. MARCHILDON[90]

While we watch GM, Ford, and Toyota retire into the catch-up oil and auto era that China is now experiencing, you and I will reflect on North America's newly arrived era of "peak car."[91] In this more circumspect new world, drivers have collectively, if unconsciously, maxed out their driving pleasure at one-hour commutes. And, as we begin to collect our dividends on yesterday's tech stock Horsemen, which are today's utilities, the real capitalists will be assuming risk and placing bets on the next Horsemen of the next New Economy. Some will lose, and some will win, but the rest of us will eventually benefit. That's

how Andrew Carnegie, the Mellons, Rockefeller, and Ford did it. So, too, did Warren Buffett, Bill Gates, and Steve Jobs, among many others. In Canada and the United Kingdom, newspaper magnates like Roy Thomson, Lord Thomson of Fleet, and the Demarais family, to name a few, are also on the list. As Beaverbrook business scholar Gregory P. Marchildon explains, that's how capitalism is supposed to work:

> … Aitken's organizations such as Royal Securities and Montreal Engineering were money-making machines because they were innovative and purposeful organizations that harnessed individual and institutional strengths. By funneling large amounts of capital to existing companies, these organizations added real value to the Canadian economy. They also augmented substantially Aitken's profit making capacity by allowing him to do progressively bigger deals with more influential people and institutions, thereby constantly expanding his horizons, something at least as important to Aitken as the rather unimaginative and static matter of consuming wealth. In other words, Aitken's organizations were designed to feed a voracious appetite for profit, and almost all of that profit was thrown back into his financial machine to generate even more. Aitken was a capitalist in the classical meaning of the word, at least until he left Canada for England; that is he emphasized reinvestment far more than consumption, and he found in profit the ultimate yardstick of success.[92]

No small factor in Aitken's success was the Kondratieff Spring of the early 1900s, and an ability to "capitalize" on its innovations in steel, oil, and automobile manufacturing to both finance and build major utilities and other Canadian infrastructure. Also helpful was a plan, carefully laid by Canada's first prime minister, Sir John A. Macdonald, and brought to fruition by Sir Wilfrid Laurier, its seventh. Macdonald's National Policy, carefully crafted to marry synergies between immigration, land policy, infrastructure (railway) building, and geopolitical necessity opened the Canadian West, secured Canada from encroachment by its southern neighbour, and created one of the great agricultural regions of the world. The pre-eminent historical geographer Carville Earle places U.S. history in a similar perspective, referencing Nikolai Kondratieff's long-wave theory as it related to movements of people, urbanization, industrialization, and innovations in transportation and agricultural production.[93] Many, indeed most, commentators and analysts in the energy and innovation fields continue to build, sometimes unwittingly, on the intellectual foundations Kondratieff laid in these areas.

Appropriately – given the severity of the current Kondratieff Winter – and like the role of the central bank, capitalism itself is being placed under the microscope. In early 2012, two influential journals, Britain's *Financial Times* and America's *Foreign Affairs*, devoted major sections and valuable insights to this issue. Two broad themes emerged confirming the trends, if not yet the outcomes, predicted by James Dale Davidson and Lord William Rees-Mogg in 1997. While the end of the nation state and significant movement to sovereign individualism[94] may not yet be at hand, the *Financial Times* and *Foreign Affairs* themes confirm the triumph of the market economy and the crisis of governance as democratic institutions are increasingly captured by special interests or simply lose coherence.

The first thing to note is how much the version of capitalism that Nikolai Kondratieff studied has changed. As the indispensable *Financial Times* columnist John Kay[95] teaches, even the word does not mean much any more. Certainly Karl Marx never used the word "capitalism," while the true capitalists – the Siemens, Carnegies, Rockefellers, Arkwrights, and Beaverbrooks, who built and owned factories and machines ("capital") and therefore controlled both the means of production and exchange – only existed for a brief interlude. The term nonetheless remains in use by both supporters and opponents of the market system, even though today companies are more likely to be owned by a pension fund, a family business, or an international assortment of individual investors than by a "capitalist."

What changed was the creation of the limited liability corporation that distributed ownership over a number of shareholders, thus divorcing ownership from control. As Kay explains, those who control need be skilful only in hierarchical politics. Today's company is less concerned with buildings and machines than with competitive advantages such as systems of organization, its reputation with suppliers and customers, and capacity for innovation. These cannot be owned at all. "By continuing to use the nineteenth century term capitalism for an economic system that has evolved into something altogether different, we are liable to misunderstand the sources of strength of the market economy and the role capital plays within it," Kay concludes.[96]

This change explained to me why, Warren Buffett notwithstanding, so many CEOs today are achieving celebrity status or, particularly in the banking sector, notoriety. For the most part, these people are "hired guns," often paid huge sums of money and stock options and appointed by activist hedge funds, who have gained prominence in the world's major resource sectors but otherwise have little in the way of a personal stake in the operation, the community,

or the country in which they work. It is also why, as investors, we have to pay attention to the character and track records of such people when we choose to make a particular investment. Unlike Ford or Carnegie, whose innovation and risk-taking revolutionized whole economies, these are revolving-door, impersonal, and dispassionate CEOs who answer to boards of directors and shareholders more concerned about corporate governance and capital discipline. They may boost shareholder value and mark a transition to a maturing of the sector, but the question remains whether, by stacking boards of directors and removing the buccaneer entrepreneurs who built the corporation, they are also stifling innovation and acting in ways that are contrary to the interests of the community at large, never mind the interests of a national economy that is stagnating in the trough of a Kondratieff Winter.[97]

Even so, most commentators agree the market economy has been responsible for the greatest surge in global wealth in history. That the powers of the nation state, if not its entire existence, are clearly threatened by the emergence of this version of the corporation seems to be little understood or at least largely ignored. As Larry Jeddeloh has indicated, market capitalizations of large corporations are routinely larger than most nation states.

Be that as it may, it is the market economy (a term that is interchangeably, if erroneously, coupled with the term "capitalism") that is under the microscope as the global economy completes the second decade of the twenty-first century and it, according to most commentators, despite being severely tested in the current Kondratieff Winter, emerges largely triumphant – a fact made apparent when the fall of the Berlin Wall in 1989 exposed the deep defects of central planning.[98] Though East Germany shared the same history, language, culture, and value systems, it enjoyed none of the prosperity conferred on West Germany by the market system. Other centrally planned economies got the message, and, by 2005, according to the IMF, eight hundred million labourers were engaged in competitive export-oriented jobs, an increase of five hundred million since 1989.[99] North and South Korea, Finland, and Estonia offer similar comparisons.

The only question is which version, democratic or authoritarian, of market economy/capitalism will endure, and there appears to be little doubt about even that. It would appear that, with the open and widespread dissidence about alleged fraud in the 2012 election that returned Vladimir Putin to the presidency, another Orange, Velvet, or comparable revolution is possible, this time in Russia. Though distracted by Putin's annexation ventures in 2014, Russia and its brand of authoritarian capitalism could yet wither under the

glare of democratic accountability. So, too, might the Chinese model, though it could take a bit more time. In any case, *Time Magazine* editor-at-large and CNN's "GPS" host Fareed Zhakaria observes that "democracy can only 'catch on' in economically developed countries. If developing countries are 'prematurely democratized,' the result is a populism that ends in economic catastrophe and political despotism."[100] Examples of successful Third World countries that have made the transition from authoritarian to democratic rule are Chile, Taiwan, and South Korea.

But if democratic capitalism in the West is the sole standard-bearer for a prosperous global future, then both democracy and capitalism may be in for trouble. Globalization and digitization resulted in the deindustrialization of vast regions of the West, while blunted policy tools, little international co-operation, and clumsy democracies rendered governments ineffective, thus contributing to popular disaffection and "undermining the legitimacy and efficacy of representative institutions," writes Charles Kupchan, professor of International Affairs at Georgetown University.[101] Similarly, Stanford University's Francis Fukuyama says the future of democracy is being destabilized by economic and social trends that are reducing U.S. median incomes, while the benefits of technological innovation are accruing only to the most talented. In 1974, the top 1 percent of the population earned 9 percent of GDP; in 2007, it accounted for 23.5 percent of GDP. The real villain, he says, is technology. While, in earlier phases of industrialization, the benefits flowed down, today's technological advancements mean the loss of low-skill jobs (including, according to Lawrence Summers, in places like China where manufacturing employment is down from fifteen years ago[102]). Appealing to today's "knowledge economy" as a solution only draws a "gauze veil" over the hard facts of deindustrialization,[103] which is resulting in mass unemployment, says Fukuyama, ironically adding that the key to the creation of a new, less-expensive public sector is to liberate it from the grips of the stakeholder interest groups by moving to technologically delivered services.

Beyond the statistics abutting the "inequality" debate, the flashpoint for discontent with democratic capitalism may not be the ups and downs and ins and outs of the market economy, which, as Kondratieff demonstrated, are normal enough even if its enablement of "resource wars by other means" should give everyone pause as both state-owned enterprises like China and multinational, shall we say "democratically owned," corporations like Xstrada move holus-bolus to commandeer massive resources in Canada, Australia, and Africa. Neither is it devalued currencies, collapsing social services, escalating

taxes, nor even the wage disparities that have resulted from globalization and innovation. These merely provide the tinder for the gathering firestorm. Rather, it is what Jonathan Kirshner, aptly keying off the Johnson and Kwak book *Thirteen Bankers*, describes as the fact that six (some believe the number is really ten) gargantuan "too big to fail" institutions continue to threaten the economy and our democracy. "Worse, Wall Street and Washington have become so inbred that ideological homogeneity reinforces and legitimizes an implicitly corrupt system."[104] Crony capitalism, of course, is not real capitalism. "Crony capitalism abounds when government leaders, usually in exchange for political support, routinely bestow favours on private-sector individuals or businesses. That is not capitalism," writes former Federal Reserve chairman Alan Greenspan, who should know. "That is corruption."[105]

Indeed cronyism is the problem, not capitalism. But why cronyism? Until the late 1970s, when the real economy was peaking, crony-like practices were scarcely evident. Only when the financial economy ignited did such problems and gross inequalities become systemic. This suggests that it is the existence of the financial economy that is the breeding ground of cronyism and gross inequalities, but try telling that to a senior whose retirement savings plan is being inflated away, or someone who lost their money in the 2008 stock market crash and was too afraid to get back in, or someone still underwater with their mortgages despite having already paid thousands, or even hundreds of thousands into it. In this light, it is truly a wonder that the protests have been confined to the Tea Party and Occupy movements. Yet, as *Financial Times* columnist Edward Luce observes, "there is nothing … in the atomized discomfort of middle-class America that would suggest a revolution in the making … people do not talk about a new age of populism … Earlier periods of economic turmoil, most notably during the robber baron decades of the late-nineteenth and early twentieth century, did turn populist. Then, like now, both parties tended to go to the same sources for money. In Mark Twain's novel *The Gilded Age*, the deepest well of election finance was the railroad capitalists. Today it is Wall Street. Then, as today, was a period of electoral volatility …"[106]

Then, in an inadvertent evocation of the K-wave cycle, Luce confirms how both eras were driven by "disruptive technologies that upended settled patterns of work and pushed the winners into stratospheric new levels of wealth: what the internet and financial globalization has done for the net worth of America's superclass since the 1990s finds its closest parallels in the income effects railway, electricity and the internal combustion engine had 100

years ago …[as one] late nineteenth century electoral manager famously said, 'The three most important things in American politics are money, money and I forget what the other one is.'"[107]

But the prairie populism of the early 1900s has no equivalent today. Tea Partiers may have railed against the bankers, but they refused to give up their medicare entitlements. Even the Occupy movement, which had no institutional apparatus, hated government but loved government programs. Today's squeezed middle classes are economically diffuse and geographically scattered. According to economic historian Michael Lind, "The largest squeezed group today are people with high school diplomas working in the service sector …" But such people aren't in the streets protesting. To the contrary, "… most of them are living in the suburbs and watching TV." And when politicians appear, they tend to switch the channel, adds Luce.[108]

In other words, corruption of the democratic process, on the one hand, and the pacification of the very citizens who might correct that defect, on the other, are signs that the nation state is ending – not with a bang, but with its citizens, us, wimping out in front of the TV and voting with our feet when our entitlements (for as long as they are available) are threatened – all but surrendering the nation state to the corporate giants and state-owned enterprises, provided, of course, some other nation state does not mobilize against us first.

Out of such a morass, the erudite, the nimble, the "cognitive elite," would be foolish not to escape the burdens of citizenship to pursue worthier and wealthier lives as sovereign individuals – customers of the world, wise in the ways of the financial economy. Conversely, it isn't surprising that people are defeated by the arcane nature of the monetary and fiscal policies their politicians undertake in their name. That is one of the reasons John Budden and I undertook *The Dog Bone Portfolio* as a project. And, as Robert Reich, former U.S. secretary of labour under President Bill Clinton, reminds us, thanks to technology and despite the great cost to workers and to the environment, consumers and investors have never been more empowered. To those who conquer this tool will go the spoils. In another confirmation of a trend identified by Davidson and Rees-Mogg, Reich observes that "technologies are outpacing the capacities of democratic institutions to counterbalance them … while corporate money is undermining democratic institutions in the name of better deals for consumers and investors."[109] No one, he concludes, has figured out how to put capitalism back into balance.

Perhaps no one will. And the market society,[110] along with the market economy, may already be with us. In the market society, everything has its

price, from the commodification of children and body parts to the selling out of heritage and resource assets. And so nations, as well as men and middle classes, become hollow. The collapse cannot be far behind.

The failure is, as William Rees-Mogg wrote in 1973, one of inordinacy,[111] the lack of restraint. The failure to accept discipline in the management of debt and derivatives, or to prepare for deindustrialization and declining demographics, is the sword of Damocles dangling perilously over today's globalized Kondratieff Winter, which might otherwise have been restricted to the running out, rusting out, and wearing out of the factors of production. Greed, stupidity, hubris, human error, and immature or misapplied academic disciplines are all factors, none of which can be legislated away. And whether the economy is financialized or real, credit expansion is clearly the wild card. As Ludwig von Mises observed, "Credit expansion is the government's foremost tool in their struggle against the market economy. In their hands is the magic wand designed to conjure away the scarcity of capital goods, to lower the rate of interest or to abolish it altogether, to finance lavish government spending, to expropriate the capitalists, to contrive everlasting booms and to make everybody prosperous."[112]

Indeed, as we have seen, such expansion can have devastating, as well as constructive, outcomes. If tamed to productive, not financial, uses, it would seem to matter little whether it was available under the fractional reserve system of banking, or whether it was tied exclusively to a gold standard. Speculative activity, after all, has a place in the market for the purposes of shaking out technological winners and losers, a useful activity particularly suited to the wealthy who can afford to take such risks so that the rest of us may benefit. This kind of activity does not belong in the same category as tulip bulb manias and derivatives proliferation – which merely masquerade as real products. Yet, as we have also seen, bankers and politicians routinely bring out the worst in one another. Some constraint on their activities would, therefore, appear to be necessary, including the option of electing central bank and Federal Reserve chairmen, provided, of course, this didn't prove yet another avenue for voters and special interests to claim generous entitlements from the Treasury. At a minimum, no speculative excess must be allowed to proliferate at the expense of the world's financial system, but this may be possible only if credit expansion is required to serve, not financial capacity, but productive capacity, and only productive capacity – that is, things that are made in the real economy.

As informed investors, we may ride out or even profit from the excesses

and challenges of the financial system in which we find ourselves. A whole financial services industry exists to serve those willing to bet for or against currencies, hedge their investments, or play with puts and calls, credit default swaps, and other arcane investment strategies. Many have become very rich using such strategies. But the system cannot change without the existence of an informed citizenry and the restoration of real builders, producers, and traders. Eminent American social scientists like Charles Murray and the late James Q. Wilson invoke Victorian times as a prototype for ours. "Whatever the Victorians did right in England, we need to resuscitate over here… In the late nineteenth century, the entire English population were propagandized into buying in to a certain code of morals,"[113] Charles Murray told Edward Luce of the *Financial Times*. James Q. Wilson called it "character,"[114] which Victorians built through the exercise of self-restraint and doing good works. Davidson and Rees-Mogg recall the achievements of the British Empire pre-1914 in a similar light: "For all America's might and wealth at the close of World War II, it was never strong enough to restore a world system as liberal and open as that which existed before 1914."[115]

In the months before his death in December 2012, Lord Rees-Mogg reprised some of his work from the 1970s for his column in *The Times*. By the 1970s, Rees-Mogg had already been introduced to Kondratieff's work by a fast-rising young economist and now journalist named Peter Jay, who in turn had learned about Kondratieff from Professor Nicholas Kaldor. In 2012, however, he wondered, following exposure of manipulation of the Libor rate by Barclays, and money laundering by HSBC, if banks with centuries of integrity, of the kind admired by Murray and Wilson, were falling into a trap where no one knew where rotten apples began and bad regulation took over. Had banks become so big that no one knew what was happening? he wondered. Like a latter-day Walter Bagehot, Rees-Mogg then warned that "Modern economists may regard the gold standard as an irrelevant piece of financial history but for at least three hundred years it imposed a discipline on banking that has now been lost."[116]

From the recoining of the currency in 1717, when Sir Isaac Newton was master of the mint, to an Empire that spanned a quarter of the earth's surface and whose legacy includes parliamentary democracy and the English language, how the mighty, even after Suez, had fallen. For the man who so ably used history to understand the future, a broken heart was surely as big a factor as cancer in Lord William Rees-Mogg's death.

As *The Dog Bone Portfolio*'s appendix on gold demonstrates, however,

and as Rees-Mogg himself anticipated in his 1974 work *The Reigning Error*, from the rubble of Empire(s) a golden phoenix may yet rise. In the meantime, and not to be forgotten, is how the British tradition supplied Canada with a durable stock of bean counters – the people who saved it from the banking crisis – and how it is a Canadian, Mark Carney, who will help repair the British banking system. Neither can we forget the many others who acquired their right of citizenship in whatever country they inhabit by sweat equity, that is, by being builders. John Budden and I both have many of these in our own families. While there is no mistaking that Kondratieff was a great man who taught us about the long wave and that his successors, by extension, taught us how to ride it, it is the former tradition of building that John Budden and I commend in this book as the true course to true prosperity for individuals, corporations, and nations.

APPENDICES

APPENDIX A

Black Swan Events and Worsening Case Scenarios

Random events that rarely happened in the past happen quite frequently today.

–JOHN BUDDEN[1]

In 1985, John Budden and Ted Rabin co-founded Rabin Budden Partners, a Toronto-based investment counselling firm that managed no-load mutual funds. The business was later acquired by Altamira Management to become one of Canada's largest and top performing no-load mutual fund families in the 1990s. On Black Monday, October 19, 1987, stock markets around the world crashed. In the U.S. and Canada, declines were over 20 percent, but in Hong Kong, the market dipped by 45 percent, while the New Zealand stock market plummeted a full 60 percent and needed many years to recover. CBC Radio recruited John to comment on the day's events. Unperturbed, he told his Canadian listeners that they could use the banks, buy gas, and go shopping – that nothing had really changed. The stock market was unwinding, but otherwise it was business as usual.

It took some time for the stock market to recover, but eventually it did.

Unlike Budden, whose years of experience weathering market brutalities allowed him to be sanguine about the day's events, Nassim Nicholas Taleb, a self-described specialist in "chance" and "uncertainty," found that Black Monday in October 1987 was a defining moment for which everything in his upbringing and education seemed to have prepared him.

Taleb is a Greek Orthodox Lebanese who was raised in Beirut. A polymath, he obtained degrees from the University of Paris (where he did his Ph.D. on the mathematics of derivatives pricing) and the prestigious Wharton School (where he completed an MBA). As a newly minted quant trader, he applied mathematical models of uncertainty to financial data and complex

financial instruments.[2] In October 1987, Taleb was working at the midtown Manhattan offices of the investment bank Credit Suisse First Boston where he saw emotional investors overwhelmed by the largest one-day percentage drop in modern market history. When some of them responded by committing suicide, Taleb felt as if he were back in war-torn Beirut. He also felt strangely vindicated. During his time at Wharton, he had developed a specialty in "rare" and "unexpected" events and, in particular, the flaws and limitations of the mathematical models currently in use for this purpose. Black Monday confirmed the models beyond his expectations. Taleb had used his findings to insure his portfolio and suddenly found himself a rich man with an idea that would make him famous.

Taleb's theory about Black Swans – that is, outlier, rare events that produce extreme impacts and are explainable only after the fact – reveals how we overestimate cause and effect and underestimate the effects of chance on society. Everything from the invention of the wheel and the internet, various and sundry stock market crashes, World War I and 9/11, qualify as Black Swan events, says Taleb, some devastating but others positive. While, after the fact, we may understand and even prevent the recurrence of bad events, by definition Black Swans cannot be predicted.

The causes of 1987's Black Monday stock market crash remain controversial, but, for our purposes, Andrew Beattie's explanation in *Investopedia*[3] is a good primer. Investigations into insider trading allegations compelled an exodus of investment out of the then-fashionable and rapidly growing conglomerates, he writes, causing, in turn, a rash of stop-loss orders to kick in. After that, widespread panic and stock-dumping took over.

Since high-frequency algorithmic trading was becoming a feature of the 1980s stock markets, some believe it, too, was a factor.

Unlike Black Monday, the causes of the 2008 crash were various, built on those of the late '70s (in which Black Monday was a significant marker) and, given the inevitability of the long wave itself, predictable, though not with the kind of precision Taleb rightly says is impossible. At time of writing, in mid 2012, despite the application of heroic monetary and fiscal measures – from bazookas to helicopters and firewalls – most of those causes remain, either unaddressed, or partially addressed through legislative initiatives such as passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act in July 2010[4] or, in the case of the debt crisis, have systemically worsened. The Kondratieff Spring will be delayed until the Kondratieff Winter plays itself out, which will not be any time soon. In the meantime, risks abound.

The term "Black Swan," like the word "Kleenex," has achieved some measure of generic status. Other terms also apply, if inaccurately: wild card events, systemic risk, "tail" risks, etc. Each has a specific definition involving low-probability events that can cause violent market moves. For our purposes, they are all risky – whether as models or events.

Like Taleb, Nikolai Kondratieff was a gifted mathematician and scholar who would not have been surprised by Black Swan events. The theories of both men owe a great deal to what we now understand as complexity and chaos theory, that is, the study of minute impacts within various complex systems, to which Kondratieff's theory of conjuncture is more than a distant cousin. Kondratieff would likely see Black Swans as either fluctuations (price changes) within or drivers (innovations) of the long wave. While remaining sudden and high-impact events, they would be regarded as germane to the long wave's movements, even as they fell within a predictable pattern.[5]

The essential question for investors is whether or not the trough of the first Kondratieff Winter of the twenty-first century was reached during the market lows of 2008 and 2009, or whether greater lows are yet to be endured. The following is a list of some of the many Black Swans that continue to lurk in the system to threaten, if not another low, then severe volatility in whatever direction the markets move. With wisdom and prudence, our policy-makers may offset or mitigate the worst effects of Black Swans, though even they face serious constraints and have only limited sets of tools with which to tackle the inevitability of the long wave's path. Establishment policy-makers need to learn to work with the wave, a phenomenon most do not even recognize (though, without naming Kondratieff, a paper by former deputy governor of the Bank of Canada and subsequent head of the research departments of the Bank for International Settlements and the OECD, William R. White, suggests it may be time to do so).[6] If we are truly lucky, some of the Black Swans and Worsening Case Scenarios listed below will have been addressed or avoided by the time you read this book.

Credit Anstalt II/Lehman II

Goldman Sachs peddled Greek bonds to major European banks including German banks. The tragedy is that the German public will be on the hook if Greece defaults.

–JOHN BUDDEN[7]

Writing in 2011, the economics editor of *Bloomberg Businessweek Magazine*, Peter Coy, described how the collapse of the Credit-Anstalt in 1931 triggered a domino effect that felled banks across Europe and shook confidence in America. As one of the most important institutions of the Austro-Hungarian Empire, it not only had made bad loans but also had absorbed the bad loans of already-failed, weaker banks. When the full extent of its losses was revealed, depositors panicked and withdrew money. Attempts by the Austrian government to guarantee the deposits merely drew attention to its own lack of creditworthiness. Depositors in Warsaw, then Amsterdam, also withdrew their funds and, from there, the panic spread. This crash marked the end of the recession that had commenced with the stock market crash of 1929 and the beginning of the Great Depression. "The scariest thing about the Credit-Anstalt default is that it occurred in a small, peripheral country, just as today's worst problems are concentrated so far in Greece, Ireland and Portugal, which combined make up just 5 percent of the twenty-seven-nation European Union's gross domestic product," Coy wrote.[8]

By 2011, Europe in fact had already experienced a "bank run." In September 2007, the first signs of a European banking crisis surfaced when, for the first time in one hundred and fifty years, British depositors lined up to withdraw their funds, in this case from a Newcastle-on-Tyne bank called Northern Rock, thus raising the alarm about European exposure to U.S. subprime mortgages. Fatefully, Northern Rock had a deal with U.S. banking behemoth Lehman Brothers and was suffering the consequences.

The euro crisis, along with the American banking crisis, was decisively triggered when Lehman Brothers itself declared bankruptcy in September 2008. Since then, the depth and breadth of interlocking loans and derivatives exposures, international as well as European, along with exposure by European banks to the sovereign debt of effectively bankrupt European nations, has become legion. A default by one – whether by a nation, such as Greece, or a bank – could collapse the whole of an already-fragile global banking system.

Massive injections of liquidity from the world's strongest central banks to the European Central Bank at the end of 2011 led to the creation of a program

called the Long-Term Refinancing Operation (LTRO) in early 2012, which allowed banks to borrow from the ECB at very low rates. This was followed, in September 2012, with a new bond-buying program, Outright Monetary Transactions (OMT), otherwise known as Mario Draghi's "it will be enough" or "whatever it takes" program. Despite the need, in May 2012, to nationalize Bankia, a major Spanish bank overexposed to domestic mortgage debt, both the LTRO and the OMT stabilized the European banking system at least in the short term. Yet risks remained. Non-compliance with ECB bond-buying conditions by needy sovereigns was one that could bring down the EU, while Germany could yet balk at being on the hook for others' debts. Then there is the question of how much time will be required to effect the banking, fiscal, and political union many argue is now necessary. In addition, question marks persist over the viability of a policy tool that drives up stock prices, thus benefiting investors, while increasing commodity prices that create hardship in rising food and fuel prices for the majority, particularly in developing nations where skyrocketing prices are an underlying cause of revolution. Finally, many European banks remain fundamentally unsound because of exposure to the debt of the remaining risky sovereigns, any one of which could itself declare bankruptcy and so trigger the bankruptcy of the bank holding its bonds, which then, much like Credit-Anstalt in 1931, would trigger a falling dominoes effect among European, then American, and, this time, emerging economy banks that are also exposed. The Cypriot Crisis of March 2013, during which depositors again lined up to withdraw funds following a bailout attempt by the IMF and EU involving taxes on deposits, was another reminder of this vulnerability.

Though in 2013 banks – either self-directed or by regulatory authority – were under pressure to raise capital ratios, few believed their efforts were sufficient. In the U.K., as in the U.S., banks continued to combine retail and investment banking in what Suzanne McGee, in her book *Chasing Goldman Sachs*,[9] has described as their "utility" and "casino" functions and where "incentive compensation" – namely, outsized bonus packages and the creation of "products" – rather than services still informs the banking culture, knowing full well the taxpayer will back them when the "casino" function fails. Though Senators Elizabeth Warren and John McCain introduced a bill that would separate retail and investment banking, few believed their twenty-first-century equivalent of the Glass Steagall Act, which separated investment and retail banking, would be passed, though the Volcker Rule, another variation on the theme of Glass Steagall, was finally passed in early 2014 as *Sec.619 Prohibitions on proprietary trading and certain relationships with hedge funds and private*

equity funds of the Dodd-Frank Wall Street Reform and Consumer Protection Act. As its title suggests, this act prohibits banks that take retail deposits from proprietary trading and from owning or sponsoring hedge funds or private equity funds. Trades of a highly speculative nature, for instance, were behind the fall of Lehman Brothers, the fourth-largest investment bank in the U.S., which had made an enormous bet on housing.[10] And of course no one sees a time when Western banks obtain capital ratios enjoyed by those in Brazil where, according to James Dale Davidson, "all banks must maintain minimum capital ratios of at least 11 percent [but where] many Brazilian banks have capital ratios of 16 percent or more – double, or even triple the levels in the United States and Britain."[11] But then Brazil endured many trials-by-hyper-inflation, the most recent in the mid-'90s, and has learned its lesson. As of November 2013, on publication of his book *The Map and the Territory*, Alan Greenspan was calling for 20 percent capital ratios as the simplest, overarching way to address banking risk.

Derivatives

Credit default swaps added to the solvency problems of Bear Stearns and Lehman Brothers in 2008. Can it get worse? You bet! One quadrillion dollars of outstanding derivatives are the Big Kahuna!

–JOHN BUDDEN[12]

The above situation is exacerbated by two additional factors: the first being the need for European banks to deleverage (pay down debt) worth trillions of dollars, while the second factor is the exposure of U.S. banks to credit default swaps, a form of insurance purchased against European sovereign debt. As Larry Jeddeloh points out, "bank deleveraging was at the heart of the 2008–2009 financial crisis. U.S. banks shed assets at a rapid rate in order to meet margin calls, bolster capital and pay-off derivatives trades that they were on the wrong side of."[13] But the recipe for Armageddon lies in the possibility that, when Europe implodes and banks fail, "U.S. taxpayers will hold the bag for trillions in derivative contracts held by Bank of America ($75 trillion) and JP Morgan ($79 trillion). Even worse, the total exposure may not be known because Wall Street successfully lobbied during passage of Dodd-Frank legislation in Congress that no central exchange could track net derivatives exposure …"[14]

The significance of this cannot be overstated. As prize-winning Peruvian economist Hernando de Soto explained, in 2009:

> Today's global crisis – a loss on paper of more than $50 trillion in stocks, real estate, commodities and operation earnings within 15 months – cannot be explained only by the default on a meager 7% of subprime mortgages (worth probably no more than $1 trillion) that triggered it. The real villain is the lack of trust in the paper on which they – and all other assets – are printed. If we don't restore trust in paper, the next default – on credit cards or students loans – will trigger another collapse in paper and bring the world economy to its knees … everything we own travels on property paper. At the beginning of the decade there was about $110 trillion worth … representing tangible goods such as land buildings, and patents world-wide, and some $170 trillion representing ownership over such semi liquid assets as mortgages, stocks and bonds. Since then, however, aggressive financiers have manufactured what the Bank for International Settlements estimates to be $1 quadrillion worth of new derivatives (mortgage backed securities, collateralized debt obligations and credit default swaps) that have flooded the market. These derivatives are the root of the credit crunch.[15]

Lacking any transparency, these derivatives are the source of widespread fear that owners of derivatives will be unable to repay their loans, he explained. As trust breaks down, a chain reaction sets in that paralyzes credit and investment. As transactions shrink, a catastrophic drop in employment and property values follows. Speaking with a reporter in April 2009, by which time the Bank for International Settlements had revised its $1 quadrillion valuation of derivatives to $600 trillion, de Soto added:

> This toxic debt is the elephant in the room and solving the problem is the missing link to getting the world economy moving again. Until we know what proportion of the estimated $600trn [£400trn] of derivative contracts is toxic, then credit markets will remain in a state of chronic paralysis … No amount of fiscal stimulus or new international regulation will get the banking system fixed until we know how much poisonous paper there is on the balance sheets of the banks. The G20 leaders have given the world economy a blood transfusion, but now they need to get on with the operation if they are to save the patient's life.[16]

Later he would point out that $600 trillion is forty times what the U.S. produces in one year.[17] Another derivatives watcher, metals trader Jim Sinclair, points out that the whole of the global economy is worth only $80 trillion.[18]

A stark reminder of the possibility of a derivatives explosion again emerged

when JP Morgan Chase admitted to losses of $2 billion in derivatives trades in May 2012, a drop in a bucket of $600 trillion, to be sure, but still a stark reminder. The absolute worst-case scenario in this regard is described by a former Goldman Sachs co-manager of hedge-fund sales in equities and equity derivatives in Europe. Raoul Pal maps out one end-game scenario, which is summarized in the watchdog website *Zero Hedge* as follows:

> Consider this:
>
> - We are here …
> - We don't know exactly what is to come, but we can all join the very few dots from where we are now, to the collapse of the first major bank …
> - With very limited room for government bailouts, we can very easily join the next dots from the first bank closure to the collapse of the whole European banking system, and then to the bankruptcy of the governments themselves.
> - There are almost no brakes in the system to stop this, and almost no one realizes the seriousness of the situation.
> - The problem is not Government debt per se. The real problem is that the $70 trillion in G10 debt is the collateral for $700 trillion in derivatives…
> - Yes, that equates to 1200% of Global GDP and it rests on very, very weak foundations.
> - From an EU crisis, we have to join only one dot for a U.K. crisis of equal magnitude.
> - And then do you think Japan and China would not be next?
> - And then do you think the U.S. would survive unscathed?
> - That is the end of the fractional reserve banking system and of fiat money.
> - It is the big RESET.
>
> Raoul Pal continues:
>
> - Bonds will be stuck at 1% in the U.S., Germany, U.K. and Japan (for this phase).
> - The whole bond market will be dead.
> - Short selling on bonds – banned
> - Short selling stocks – banned
> - CDS – banned
> - Short futures – banned
> - Put options – banned
> - All that is left is the Dollar and Gold

It only gets better. We use the term loosely:

- We have around six months left of trading in Western markets to protect ourselves or make enough money to offset future losses.
- Spend your time looking at the risks of custody, safekeeping, counterparty etc. Assume that no one and nothing is safe.
- After that…we put on our tin helmets and hide until the new system emerges.[19]

Raoul Pal's Endgame/Armageddon recipe – the most visited page on *Zero Hedge* of all time – would bring the world's second Credit-Anstalt and/or Lehman moment to fruition, thus kick-starting the second leg of the Great Recession, what no one could then deny is the Second Great Depression that would be global in nature as banks, as well as global patterns of trade and commerce (see below), are affected.

"I am convinced that one day the whole derivatives market will cease to exist, will become zero," Swiss fund manager Marc Faber told *Business Intelligence*,[20] while Andy Xie, writing in May 2013, noted that five years after the 2008 financial crisis, the situation is worse. With the world's top ten banks holding assets worth close to one third of global GDP, a failure by even one could cause a recession and take down a country or two, even as the shadow banking system has become even more dangerous. "A hedge fund can leverage up ten to twenty times through derivative instruments," he wrote.[21] In his report to Berkshire Hathaway in 2002, Warren Buffett called derivatives "time bombs," and concluded that

> the derivatives genie is now well out of the bottle, and these instruments will almost certainly multiply in variety and number until some event makes their toxicity clear. Central banks and governments have so far found no effective way to control, or even monitor, the risks posed by these contracts. In my view, derivatives are financial weapons of mass destruction, carrying dangers that, while now latent, are potentially lethal.[22]

EU Break-up

Investment banking loan sharks peddled credit drugs to Greece. Now Greece is on the edge of defaulting or, if push comes to shove, of leaving the European Community.

–JOHN BUDDEN[23]

See above. Any country that defaults on its debt may also decide to leave the eurozone and replace the euro with its own currency, a move that could help it restore competitiveness but that also could trigger an international banking crisis and the end of the eurozone, or the beginning of a new configuration as other debt-riddled countries follow suit. Like Credit-Anstalt II, this is another context in which the word "Armageddon" is routinely used because of the global impact it would have. In the eurozone alone, "contagion" could come into play as other countries consider similar measures with costs in public and private debt of some 15 trillion euros and 27 trillion at play in the European banking sector.[24] But even relatively healthy economies would suffer. As Louis Gagnon, Queen's University School of Business professor, told the Canadian Broadcasting Corporation, "The situation in Europe would create a tsunami that would reach (Canadian) shores very quickly. We would be collateral damage and this collateral damage would be very, very significant."[25] Once the euro was gone, many countries with their debt denominated in euros and their adopted currencies devalued by more than half would default. With exchange rates being established by the marketplace, there would be a "fire sale" because of so little confidence in the new currencies. "These countries would be forced to pay back debt holders in euros which they don't have. As well, financial institutions – all the banks – have euro obligations," according to Gagnon.[26] As governments default, banks holding their bonds would not be able to lend, "sparking a severe global economic contraction and causing a major economic crisis … It's one banking system … If it fails in Europe, the rest of the world would be affected … causing panic, fear … the global financial system would become paralyzed."[27]

A European collapse would have an immediate effect on Canada, which counts Europe as its second-largest trading partner. China would be in even worse shape, as Europe is its number-one trading partner.

Given linkages in the global economy, values across all asset classes, including our homes, would be affected. Another effect could be protectionism. (A little-known fact of the October 1929 stock market crash is that a debate over tariffs to be imposed by Smoot-Hawley legislation was a

contributing factor.[28]) If credit stops, then trade and other economic activity could be curtailed. If no one is trading, to whom do you sell? Jobs then are lost. This is effectively what happened in Europe and North America after the Austrian bank, Credit-Anstalt, declared bankruptcy in 1931; bank failures and massive unemployment led to the election, in 1933, of Hitler in Germany and Roosevelt in the U.S. within months of each other.

The likelihood of a eurozone breakup is increased by the fact the EU is a monetary, not a fiscal, union. For instance, the U.S. and Canada are fiscal unions with money transferred easily to debt-ridden regions by their federal governments; in fact Canada has constitutionally authorized transfers called "equalization payments" to maintain an equal level of services throughout the country (though, in practice, the provincial governments receiving such payments spend them as they wish). Neither does the eurozone's central bank, the ECB, have lender-of-last-resort powers, nor does its mandate, like that of the Fed, include the ability to fight unemployment. Even its LTRO, designed to help liquidity-starved banks, is not a form of quantitative easing, which involves the purchase of assets from banks, though the OMT takes steps to address this problem. Instead, LTROs consist of loans to banks that are repayable within a few years. PIIGS are thus being kept precariously afloat by seat-of-the-pants mechanisms and agreements through a very unstable banking system. Except for their elites, or "technocrats," EU countries, in any case, remain largely nationalistic, with little loyalty to the idea of an integrated Europe. Most importantly, according to one of the most widely respected commentators on the crisis, Martin Wolf of the *Financial Times*, there is "wide disagreement on what has gone wrong and how to put it right. In particular, the dominant German view is that the crisis reflects fiscal indiscipline. Others insist (rightly) that the core problem was excessive lending, divergent competitiveness and external imbalances."[29] If you cannot agree on what is wrong, it is much more difficult to fix it. Any remedy, such as moving to a fiscal union, would take years to implement. During that time, the risks in the system would remain. The principal economic reason for keeping the EU together, now, concludes Wolf, is fear of a breakup. The principal political reason is commitment by the European elite to the idea of an integrated Europe and their investment in it.[30] Neither is a good reason for maintaining the status quo, which, in any case, was challenged in the events and elections overthrowing governments throughout Europe during the spring of 2012 and repeated in anti-EU sentiment expressed in the 2014 election of representatives to the European Parliament.

Barring massive social unrest, an orderly breakup of the EU may not be as dislocative as some fear. Any move in any direction isn't going to work without addressing fundamental problems in competitiveness in the European south, where a 30 percent productivity gap with Germany persists. Before the euro, this gap was balanced by differences in exchange rates with the southern currencies depreciating and the northern currencies appreciating, in effect creating the optimal currency areas Nobel Laureates Friedman, Krugman, and Mundell deemed desirable.[31] In June 2012, forty German economists and professors called for a study about returning to the Deutsche mark, a North Euro, or "Thaler";[32] a similar solution has been proposed by J. Anthony Boeckh.[33] In this eventuality, Southern Europe would keep the euro and pay its debt contracts in the euro. Similarly, the Swiss economist and global investment strategist renowned for making prescient market calls, Marc Faber, sees a rally in the market should Greece, for instance, exit the euro, though not to any new highs.[34] Others believe a renewal of massive flows of liquidity will stanch any immediate downside to a default by any particular country or bank.

Risks to the global economy, and to our portfolios, are, therefore, commensurate with the degree of orderliness with which change, whether through heightened integration or disintegration, to the structure of the EU is effected. Since orderliness requires that all members of the EU agree on a process for achieving one or the other, often with a referendum requirement that would consume more time than any central bank can buy, orderly change would seem to be a remote possibility.

Deflationary Great Depression

We don't get depressions because governments don't call them depressions anymore.

–JOHN BUDDEN[35]

Since 2008, the policies of the world's central bankers, led by the then chairman of the Federal Reserve Board, Ben Bernanke, have been geared to avoiding a Deflationary Great Depression of the kind that took place in the 1930s. Though mainstream statistical analysis has determined the Western economies are not in a "depression," hence the term "The Great Recession," less conventional analyses (see Dollar Collapse below, Derivatives above) abound to demonstrate otherwise. In any case, it is unlikely the word would ever be used even in the case of a mainstream statistically verifiable depression, given the modern political spin-doctor approach to communications,

which invariably tries to be optimistic. The question for investors is not whether or not we are in depressionary times. The question is whether appropriate measures are being taken to deal with them. In this regard, of the three prevailing prescriptive approaches – Keynesianism (fiscal stimulus through deficit financing), Monetarism (application of liquidity by central banks), or Austrian School (pay down debt) – Monetarism has leapt to the forefront in today's policy arsenal while Keynesianism, though enthusiastically embraced in 2008 and 2009, has bogged down in the debate over austerity to lower debts and deficits versus increasing deficits and debt to stimulate the economy in the hope it will reignite and then grow on its own accord.

According to the author of *Monetarism*, economist and Nobel Laureate Milton Friedman, timely action by the Federal Reserve Board to apply sufficient liquidity to the banking system might have prevented the worst effects of the 1931 Credit-Anstalt bankruptcy in America. With sufficient liquidity, banks would have had the reserves, or monetary base, necessary under the fractional reserve banking system to increase the supply of money for lending into the real economy thus encouraging enterprise, industry, maintaining price levels that would support wages, and so on. But lacking liquidity, banks seized and unemployment soared.

Students of Friedman, including previous Fed chairman Bernanke, argue that deflationary prices, particularly in the U.S. housing markets, as well as the 2008 and 2009 stock market declines, have created a chasm of lost wealth that can be filled only by the massive infusions of liquidity prescribed by Friedman using, if necessary, unconventional monetary tools. Bernanke's allusion to "dropping money from a helicopter" notwithstanding, the result is that quantitative easing (QE) measures have been undertaken by all the major economies, particularly the U.S. and the U.K., but also Japan and China. In the U.S. and the U.K., QE takes the form of Treasury bond and gilt purchases that appear on the central banks' balance sheets as assets, while the monies printed to purchase these assets are recorded as liabilities. In Europe, and prior to the ECB's decision to implement quantitative easing in 2015, liquidity has taken the form of the Long-Term Refinancing Operation, that is, money loaned directly to banks, which, in turn, purchase the sovereign debt of, usually, their own countries, or reinvest it with the ECB. The Outright Monetary Transactions program allows the ECB to purchase bonds under certain conditions.

Between 2008 and autumn of 2012, the U.S. Federal Reserve Board undertook three rounds of quantitative easing. By purchasing financial assets from banks and other businesses, it injected electronically created money into these

institutions. These purchases have included mortgage backed securities (QE 3, announced in September 2012, is pledged to open-ended purchases of these at a rate of $40 billion a month, bringing the total monthly asset purchases to $85 billion), bank debt, and Treasury notes. Though other programs, such as the Troubled Assets Relief Program, allow the U.S. Treasury to purchase mortgages that are in difficulty, or Operation Twist, where the Fed lowered long-term interest rates by selling short-term bonds to purchase long-term bonds, QEs by contrast work exclusively through financial institutions where they are designed to expand what is called the monetary base, that is, the base or bank reserves on which the money supply is supposed to grow. When the system is working properly, the monetary base is 20 percent of the money supply; the other 80 percent is created by the banks themselves through the fractional reserve system.[36]

In the years immediately following 2008 when these measures took effect, and, having assumed one third of the world's GDP within their balance sheets,[37] the world's major central banks have succeeded in keeping the global economy from entering a deflationary spiral, but few would argue that the risk has disappeared. In the first instance, despite a monetary base expanded by 242 percent, the U.S. money supply has grown by only 34 percent.[38] Lacking the confidence to lend into the real economy, banks have instead repurchased government bonds or reinvested with the central bank. Absent any movement, or velocity, of money in the real economy, the real economies have not, therefore, benefited.

Given how Dodd-Frank legislation and other purported remedies only partially addressed regulatory and institutional problems, particularly in the management of derivatives and the persistent existence of banks that are too big to fail, IMF managing director Christine Lagarde was moved to tell the world in April 2013 that big banks were "more dangerous than ever."[39] In the following month, six IMF economists presented a paper suggesting policy-makers in the U.S. and the EU should address riskiness in individual banks rather than attempt a blanket solution. Certainly none of the reforms currently under way would prevent another Lehman catastrophe.[40] In the meantime, social unrest and political upheaval increasingly destabilize the eurozone, threaten the U.S., and have placed the Middle East on a war footing as the debt, worn-out factors of production, and monetary and geopolitical crises work their way forward. Any, or a combination, of these, could undo the effects of quantitative easing measures and tip the global economy into a full-blown deflationary great depression.

On top of which, the Fed action may be too little and too late. Think of the debt as an iceberg, says precious metals and commodities trader Jim Sinclair. The amount of easing supplied by the Fed barely begins to address the tip ($16.662 trillion in 2012 and increasing by $1.1 trillion per year) of that iceberg. It does not touch the unfunded liabilities (Social Security and Medicaid worth between $80 to $150 trillion) and certainly does not begin to deal with the huge amount of derivatives lurking beneath the surface. "So between the national debt and unfunded obligations, total debt … comprises no more than 25% of our iceberg. Now you can see that the Fed's monthly contribution of $85 billion (U.S.) pales in comparison to what is needed … Still we are only dealing with 25% of the iceberg … According to the Bank for International Settlements, the amount of OTC derivatives totalled $640 trillion as of June 2012 … 75% of our iceberg … It's a simple case of far too much debt chasing too few dollars, so interest rates must go up as a form of compensation … I don't have any doubt that the dollar will fall and that bonds will become worthless but I take exception to the idea that we'll succumb to inflation. We're now firmly mired in a deflationary morass and it will only become worse … The Fed blew it and will not print what's required to generate the inflation we need until it's too late."[41]

Along with the global economy seizing, in a deflationary spiral prices would continue their decline. Debt holders, particularly, would suffer as the amount of debt they held exceeded the value of their assets even as unemployment and taxes rise. For these reasons, major contemporary thinkers and commentators, such as the vigilant and ever-incisive *London Telegraph*'s Ambrose Evans-Pritchard, continue to see Europe, particularly, sliding "further into a 1930's self-destruction until it equips itself with a lender of last resort and takes all risk of a EMU (European Monetary Union) sovereign default off the table …"[42] By which he means even greater amounts of liquidity are needed, which, he recognizes, is possible only with a complete political overhaul of the EU and agreement on the installation of a fiscal union and a central bank with lender-of-last resort powers.

And yet, and yet – Rees-Mogg and Davidson in *The Great Reckoning* cite the following by economic historian, Joseph W. Davis:

> A careful reading of a mass of contemporary literature and an analysis of economic and financial developments in 1930 yield little or no support for the views (a) that Federal Reserve policy in that year was open to serious criticism, or (b) that flooding of the money supply by the Federal Reserve System would have effectively checked the contraction or moderated

> the current and ensuing collapse. With enterprise "collapsed," the forces making for contraction were too strong to be overcome by the stimulus of artificially reducing short-term money rates below the very low levels actually reached.[43]

Could it be that, as Davidson and Rees-Mogg suggested back in 1993, today's central bankers aren't doing much better? Our central bankers are justifiably credited with having prevented a deflationary collapse in 2008, but since then? During the 2011/2012 winter, M1 money supply in the big G7 and leading E7 emerging powers "buckled" and dropped from 5.1 percent in November to 3.6 percent in January and 2.1 percent in February, comparable with falls seen in pre-Lehman 2008.[44] Worse, could they be exposing the global economy to greater damage?

Opponents of the helicopter approach to reflating the global economy argue that, even if a full-blown Deflationary Great Depression can be avoided, the cure may be worse than the disease since either too much or too little reflation creates its own set of problems. Unlimited injections of liquidity, on the one hand, could lead to a hyperinflationary great depression, they say, while insufficient liquidity may recreate Japan's Lost Decades.

Hyperinflationary Great Depression

Don't worry. If necessary Janet Yellen et al. will call in Ben Bernanke's helicopters.

–JOHN BUDDEN[45]

The U.S. economic and systemic solvency crisis of the last five years continues to deteriorate, argues economist John Williams, proprietor of the website Shadow Government Statistics (SGS), and are precursors to a collapse of the U.S. dollar and the creation of a hyperinflationary great depression. A loss in the purchasing power of the dollar has been under way for decades, but this is now being exacerbated by quantitative easing measures whose additions to the monetary base have been without historical precedent, he says, a fact amply demonstrated by Bank of America projections that show the Federal Reserve will have assets surpassing $5 trillion by the end of 2014, up from $2.8 trillion in September 2012.[46] While such measures may help liquefy economies, they also lead to de facto devaluations of currencies. And while devaluations help exports and flagging GPDs, without the support of a sustainable economy they can also lead to a currency's collapse.

With unfathomable levels of personal and government debt, housing values reaching depressionary lows, and unemployment statistics reaching depressionary highs[47] (18 percent from 1929 to 1939, SGS today 22 percent), Williams concludes "there is nothing here to support the concept, let alone the possibility of an economic recovery."[48] This, combined with an expanded monetary base of unprecedented proportions and $14 trillion U.S. in cash and dollar-denominated assets *outside* the U.S., means the U.S. dollar is positioned for a massive crisis of confidence internationally, which, in turn, will trigger a domestic crisis of confidence.

Collapses in commercial, economic, and financial activities would quickly follow a dollar collapse, as would political realignment. Though the outside timing of such events remains 2014, says Williams, dollar debasement (printing money for purposes of QE) and failure to address the long-range insolvency of the U.S. government could accelerate a panic-driven sell-off of the dollar. With the system holding $2.3 trillion in asset purchases and primed for explosive growth in the money supply, the sheer velocity of money moving through the system would then overcome any inertia it experienced languishing in the money base. The Fed and the U.S. Treasury would then do what is needed to prevent systemic collapse by printing yet more money. But this would incur costs in terms of higher domestic inflation and intensified dollar debasement.

The early stages of hyperinflation would see rising prices and wages, while the velocity of money would spike as everyone tries to rid themselves of their dollar holdings. Turmoil in the food distribution chain, as well as in electronic cash and credit transfers, would follow. Though largely confined to the U.S., a hyperinflationary great depression would have implications for the global currency system as flight to the relative safety of the Swiss, Canadian, and Australian currencies takes place. Measures by citizens to beat inflation would include buying a store of products, rather than holding cash or other paper financial assets. Physical gold and silver, coins particularly, would be the primary hedge for ordinary citizens and investors alike. Government attempts to delay the full onset of hyperinflation would be short-lived. Like Weimar Germany, Hungary after World War II, and, most recently, Zimbabwe, inflation in the seven to ten digit range would take place (though Zimbabwe, at least, had a functioning black market to sustain the economy). A barter economy, with black market elements, are more likely for the U.S. but would take some time to establish. A hyperinflation can last up to two years; it usually ends with the currency being replaced by a new currency or a new monetary policy.

Adding to Williams's plethora of data, consider how, of the 775 fiat

currencies that have existed, 599 are gone. Of the failures, the median longevity was fifteen years while, of all fiat currencies, it is twenty-seven years. The British pound lasted three hundred years, but this is by far and away the exception, not the rule. One in five failures was due to hyperinflation experienced in countries from around the world such as the U.S. (1812–1814, 1861–1865), Japan (1944–1948), and Israel (1979–1985).[49]

"With no viable or politically practical way of balancing U.S. fiscal conditions and avoiding this financial economic Armageddon," writes Williams, "the best action that individuals can take at this point remains to protect themselves as to meeting short-range survival needs as well as to preserving current wealth and assets over the longer term."[50]

Williams makes a persuasive case, but deeper analysis suggests it will take more than money printing to create hyperinflation. For instance, if people perceive that demand is low and jobs are non-existent, inflation, too, will be non-existent, or at least dormant. Usually, an event changes that perception. In the case of Japan's postwar hyperinflation, it was a toilet-paper shortage. In 1922, Germans in the Ruhr Valley were told not to go to work, with the result that production fell and the economy collapsed from a lack of cash to pay war reparations. Overnight, expectations changed, and people rushed to buy basic goods. Hoarding and a breakdown in the social order began making food and other basics unobtainable within six weeks.[51] James Montier, formerly co-head of Global Strategy at Société Générale but writing in his capacity as a member of GMO's Asset Allocation team, details how conditions like these are necessary before hyperinflation is ignited:

> To say that the printing of money by central banks to finance government deficits creates hyperinflations is far too simplistic … Hyperinflation is not purely a monetary phenomenon. To claim that is to miss the root causes that underlie these extraordinary periods … (H)istory teaches us that a massive supply shock, often coupled with external debts denominated in a foreign currency, is required, and that social unrest and distributive conflict [indexed wages and pensions, for instance (author's addition)] help to transmit the shock more broadly.
>
> On the basis of these preconditions, I would argue that those forecasting hyperinflation in nations such as the US, the UK, or Japan are suffering from hyperinflation hysteria. If one were to worry about hyperinflation anywhere, I believe it would have to be with respect to the break-up of the eurozone. Such an event could create the preconditions for

> hyperinflation (an outcome often ignored by those discussing the costs of a break-up). Indeed, the past warns of this potential outcome: the collapse of the Austro-Hungarian Empire, Yugoslavia, and the Soviet Union all led to the emergence of hyperinflation![52]

Similarly addressing fears of a hyperinflationary outcome for the U.S. economy, economist Herb Grubel, professor emeritus of Simon Fraser University, argues that the Federal Reserve Board has the policy tools necessary for reducing excess reserves but that it may be politically restrained from using those tools particularly if tightening monetary policy diminishes the potential for an economic recovery.[53] Its technical capabilities include the ability to sell the securities it has purchased under QE. This has been done routinely in the past, and, though the decrease in resulting reserves (money base) would be unprecedented, so is the current magnitude of excess reserves. Another technical tool the Fed can use is to decrease a bank's *excess* reserves by increasing the *required* reserves. Finally, it can raise the interest rate it pays on those reserves, which would deter the banks from using these reserves to make loans, though Congress might object if it also meant higher rates of interest to private borrowers. Grubel thus concludes that the technical instruments available to the Fed are adequate for maintaining price stability.[54]

Grubel then adds an important qualifier:

> …in practice, the record of the Fed regarding the timely use of the available technical instruments to deal with inflation is not outstanding. Allan Meltzer has written a book about the history of the Fed. He recently noted that his study of past inflation-fighting policies convinced him that the Fed is unlikely to deal adequately and in a timely fashion with the threat to price stability existing in the wake of the Great Recession and quantitative easing.

The poor history of the Fed on this issue is due to the following facts:

> Since monetary policy influences inflation and economic activity with unknown and variable lags, all decisions[55] about the supply of money and interest rates have to be made in the light of highly uncertain forecasts of economic developments. Given this uncertainty, the Fed has to choose between two possible biases. It can err on the side of restoring economic activity and lowering unemployment through the maintenance of low interest rates or it can err in favour of preventing inflation by tightening raising rates.[56]

Since most regard inflation as a lesser evil, the Fed is pressured to err on the side of expansionary (low interest rates, QE) policy. Additionally, there are those who see inflation as a viable method of reducing government debt, though Grubel believes that the manner in which government debt is held, namely the one third that is held by government agencies whose costs would remain unaffected by inflation, and the two thirds held by the public for whom capital markets would force the U.S. Treasury to pay an inflation premium, would render the benefits of reduction in the debt from inflation much smaller than the economic and political costs of inflation. All in all, Grubel concludes that pressures to reduce unemployment will override concerns about inflation, though, since his paper was written, a bill, the Sound Dollar Act, has been introduced in Congress that, among other things, would limit the Fed's mandate to maintaining price stability (removing the need for artificially low interest rates), and to purchasing only Treasuries,[57] a step that, to all intents and purposes, points to the inevitability of higher interest rates. The problem with high interest rates, write Weidemer, Weidemer, and Spitzer in *Aftershock*, is that while Volcker raised interest rates to kill the inflationary dragon in the 1980s, back then debt levels were comparatively manageable. Today, "rising inflation will cause rising interest rates and high interest rates will make it increasingly hard and then impossible for the federal government to pay its debt or to borrow more – finally popping the government debt bubble."[58] Investors, foreign and domestic, will stop buying bonds, forcing the Federal Reserve to print more money to pick up the slack but, as investors fear higher inflation, stocks and real estate, along with bonds, will decline in value as unemployment and gold prices soar. Unable to borrow or pay anything back, the U.S. will be able to maintain its payments system but with most of the debt inflated away or defaulted on, what little remains will be paid with printed money even though the dollar itself will be dead.

Dollar Collapse

The U.S. dollar has been a fiat currency since August 15, 1971. The average life expectancy of a fiat currency is about thirty years. The U.S. dollar's life has been extended with overdoses of stimulus.

–JOHN BUDDEN[59]

Like John Williams of Shadowstats, James Rickards sees a collapse of the dollar predicated on a loss of international confidence, although he predicts a "chaotic" outcome, rather than, specifically, hyperinflation. His book *Currency*

Wars provides one scenario of how the collapse might unfold. It could start, he writes, in Europe where a Spanish bond auction unexpectedly fails. Unable to roll over some of its maturing debt, the blow to confidence is severe despite the rescue package hastily assembled by Germany and China. Then, a French bond dealer files for bankruptcy. As doubts about the dollar and euro take hold, a pension fund decides to buy gold. And so on. In short, a succession of events coalesce to cause a drop in the dollar so that, by the time North Americans tune in later in the day, a crisis is under way that, given another unfortunate succession of events, causes ultimate panic and then collapse. Even more QE by the Fed does not help; instead it confirms the catastrophic trend and fuels more panic.[60] The panic could conclude in a day or two with an announcement from the president that he is appointing a bipartisan committee to study the situation and to make recommendations and ordering the confiscation of all private- and foreign-held gold held at the Federal Reserve Bank of New York; the suspension of all electronic transfers of foreign holdings; the recording of U.S. Treasury obligations at par value to be held to maturity; the coordination of purchases of new issuance of U.S. Treasury obligations; the closure of stock exchanges until further notice; and the prohibition of all gold exports from the U.S.

Other scenarios include the possibility that the BRICs (Brazil, Russia, India, China) or one of them move to a gold peg. John Butler, author of *The Golden Revolution: How to Prepare for the Coming Gold Standard*, argues this could precipitate a run on the U.S. dollar and financial assets and a 20 percent decline in its value within twenty-four hours as investors move to real things like oil and gold. The depression that followed would precipitate crisis meetings where the gold standard may be reinstated to help the dollar maintain its reserve status.[61] Butler argues this could happen very quickly and, judging by determined moves[62] among the BRIC nations to set up their own development bank as an alternative to the IMF and thus at least lessen their dependence on the dollar as a reserve currency, Butler may not be far wrong. Other moves away from the U.S. dollar include:

- An agreement between the Chinese and the Japanese to encourage increased direct yen-yuan currency trading
- Chinese and ASEAN countries' agreements to increase yuan use in transactions and set up free trade zone
- Iran and Russia replacing the dollar with the rial and ruble in trade
- India and Japan signing a $15 billion currency swap agreement to boost trade and ease currency flows

- China and Iran talks to use a barter system for exchanging oil for Chinese goods in order to get around U.S. sanctions.
- Etc.[63]

Buttressing the fact that this could happen very quickly, economic historian Niall Ferguson in his *Civilization: The West and the Rest* points to the rapidity with which civilizations – whether Roman, Incan, Ming, or British – have fallen, as in a falling-off-the-cliff kind of fall, not the gradual decline we usually associate with civilizational collapse.[64] Finally, the most intriguing and, arguably, the most obvious argument for a collapse of the dollar comes from a former Wall Street trader who, back in 2010, observed that China may be refusing to strengthen the value of the yuan for less than obvious, but nonetheless startling, reasons:

> *(The Chinese) refuse to allow the yuan to strengthen because they know that once they do that it will mark the real end of the dollar era* [emphasis added]. So instead they are spending like crazy on infrastructure ahead of them allowing the dollar to plunge. Then the strong yuan will be employed to purchase all the commodities they need to utilize their infrastructure and the OECD gets priced out. To those that talk about yuan devaluation, you need to be specific. Devaluation versus what? Versus commodities generally along with other currencies? I can buy that argument very easily. Versus the dollar, highly doubtful. Why? The latest data [say] China owns $877.5 billion in U.S. treasuries. All they have to do is start dumping and the dollar is finished as the Fed will be forced to print so many dollars it will make Mugabe blush. People need to wake up.[65]

This kind of thinking may be behind an announcement by the People's Bank of China that it will limit its foreign reserve gold holdings to 2 percent. Buying too much gold would cause prices to surge, an official explained, which would hurt Chinese consumers.[66] It would also reflect poorly on the U.S. dollar in which the Chinese also have considerable assets. To be exact, and according to Ben Steil, director of international economics at the Council on Foreign Relations, those assets amount to over $1,000 per Chinese resident, a far cry from U.S. holdings of British Securities amounting to $1 dollar per U.S. resident in 1956, when the U.S. could afford to provoke a sterling crisis.[67]

A leading authority on reserve currencies and their histories is University of California at Berkeley economist Barry Eichengreen. He believes a new multipolar reserve currency will be in place by 2020.[68]

Japanification/Lost Decades

"…. the country largely wasted one decade in a frenzy of rash policies and foolish borrowing and will spend much of another repairing the economic wreckage"

–MENZIE D. CHINN AND JEFFRY A FRIEDEN[69]

The book *Lost Decades* draws parallels between three global regions, each of which endured debit crises spawned by what authors and political economists Menzie D. Chinn and Jeffry A. Frieden describe as "excessive borrowing" and "unproductive spending."[70] In the 1980s, it was Latin America that required a lost decade (and a half) to recover from stagnation, unemployment, hyperinflation, and political upheaval as tyrants were thrown out of office and industries, built on a borrowing binge, collapsed under the weight of their own inefficiencies and interest rate hikes designed by Paul Volcker to overcome U.S. inflation. In the '90s, it was East Asia, but Japan, in particular, where, in 1991, a real estate bubble collapsed. One lost decade later, less growth had taken place than during the two years before the collapse. Another lost decade later and, despite the tragedy of the Fukushima earthquake, Japan may only finally, in 2013, be emerging from its Kondratieff Winter. "The U.S. now faces the third lost decade of the modern era – or, more accurately, the nation has survived one and is headed for another," write Chinn and Frieden. "While borrowing pumped up the economy for much of the first decade of the twenty-first century, the eventual collapse erased most of the gains … More troubling, the United Sates emerges from the immediate crisis confronting the prospects of another decade lost … the country largely wasted one decade in a frenzy of rash policies and foolish borrowing and will spend much of another repairing the economic wreckage."[71]

Though Chinn and Frieden do not believe Japanification for the U.S. and other Western economies is preordained, the parallels between Japan's lost decades and those under way in the West are difficult to ignore. As they explain it, like the U.S. (and the U.K., Ireland, and Spain) in the early 2000s, low interest rates, easy credit, and deregulation fed Japan's real estate bubble throughout the '80s. When it collapsed, many Japanese banks became insolvent, but neither the government nor the banks were willing to recognize their losses or that borrowers were in default. Fearing a recession caused by panic among depositors and a general lack of confidence, Japan simply ignored the problems and then, eventually, bought bad loans from the banks, though never enough to restore health to the system. Effectively insolvent, but tolerated by

regulators, these "zombie banks," as they came to be known, ended up lending to "zombie firms," squeezing out healthier transactions with healthier firms. Though unemployment in the 1990s was, at 2 percent, very low, it nonetheless doubled by the end of Japan's first lost decade. In 2001, a new government changed course, injecting capital into the banks, buying up bad loans, and implementing fiscal stimulus programs. But a combination of banks using the capital to buy low-risk government bonds meant money still did not get into the real economy, even if anyone was borrowing, which they weren't, as the Japanese were too busy paying down debt and shunning bank accounts where their money earned zero interest. In 2011, 84 trillion yen remained undeposited in Japanese banks, an increase of 2 percent from 2010.[72] The result was galloping government debt (that, by 2008, was nearly twice the country's GDP), real estate prices that have yet to recover, and a stock market that languished until massive reflationary efforts got under way in 2013.

Compare that with what is happening in the U.S. and Europe. During boom times, credit rose to over 200 percent of GDP in Ireland, Greece, Portugal, and Spain, far higher than in Japan in the '80s, while Spanish housing prices may fall another 20 percent. Similarly, in the first quarter of 2012, demand for mortgages fell in Portugal, Italy, and France by 70 percent, 44 percent, and 42 percent respectively, despite liquidity available as a result of LTROs.[73] Should these factors unsuccessfully interact with any manner of U.S. "fiscal cliffs," or "debt ceilings" of the kind endured in 2012 when $1 trillion in fiscal cuts took place automatically, "another recession becomes a real risk," says analyst Ethan Harris of Bank of America. "This would be a replay of Japan's experience of the mid-1990s when a combination of premature fiscal tightening and the Asian crisis triggered a recession and deflation."[74]

But in the U.S. alone, according to David Rosenberg, Chief Economist and Strategist at Gluskin Sheff,

> … the point of a decade of lost growth does not need to be debated. It is a fact, not an opinion. The level of U.S. employment at 131.5 million is actually lower today than it was in April 2000. Over that time frame, the labour force has risen 12 million. The U.S. population has expanded 28 million. There has been absolutely no net change in employment and it's been 12 years. Real personal income per capita at just over $32,000, is no higher today than it was in December 2004. The S&P 500 at 1,250 is at the same level today as it was in January 1999. Home prices are down to 2003 levels as well … we have been in an era of stagnation from anywhere between

> seven to 13 years … (while) headwinds in the form of relentless consumer debt deleveraging, persistent weakness in home prices and retrenchment at the state and local government levels … are more than likely to outlive the federal stimulus, as we are seeing take hold right now in Europe.[75]

Like Chinn and Frieden, Rosenberg disparages the "mobilization of resources towards a non-productive consumption good such as housing" while the focus, he says, will remain solidly on "debt destruction."[76]

In other words, Japan's Lost Decades may have been a mere rehearsal for the far larger drama that is unfolding in Europe and the U.S. Clinching the deal on the Japanification or the Lost Decades scenario is demographics. Of the Western nations, only the U.S. has replacement fertility rates and, again according to (this time) a hopeful Rosenberg, eighty million millennials, who will be ready to move into the housing market around 2015,[77] though, uncharacteristically, he does not point out that most are either jobless and living at home with their parents or in university where they are piling up unprecedented levels of debt. In any case, this move feeds housing, not the productive capacity that is necessary for a strong export sector and a strong current account balance by which real government debt can be reduced, never mind pay for the huge pension and medical entitlements an exponentially rising number of senior baby boomers will demand over the next few decades. As for Europe, the argument certainly holds that it is roughly where Japan was twenty years ago, that is with aging populations not spending but paying down debt, hiding their money in mattresses or, in the case of EU peripheral countries, moving it out of the country.

The major distinguishing feature between aging Western nations and Japan, however, is that most Western debt is foreign-owned, some of it even by Japan, whereas the Japanese own most of their debt. At least Japan, in the short term, will be able to maintain its sovereignty (see Sovereign Individuals and Virtual Nations above). But it is hardly a panacea (see Japanese Yen Crisis below); indeed, this could be a major factor in Japan's final meltdown.

Japanese Yen Crisis

The Ontario Teacher's Pension Plan is one of the best-managed funds in the world, but the capital required to support a $50,000-a-year pension will be between $1 million and $3 million, given the near zero interest rate environment. The average teacher works for thirty years, retires at sixty, then could live for another twenty-five years. The plan has sensibly raised contributions and cut payouts.

–JOHN BUDDEN[78]

In the longer term, the news for Japan may be even worse. Despite high productivity levels, low unemployment, and a wealthy private sector, Japan's government is the most indebted in the world. In the eurozone, only Greece approaches its gross debt levels of 235.8 percent of GDP. According to the IMF, 25 percent of the banking system's assets is government debt, almost five times higher than the average in the developed world. Within five years, it could increase to a third of total assets.[79] Why? As Simon Johnson and Peter Boone explain, because modern financial systems have allowed governments to finance their programs by borrowing huge sums of money from investors. This worked well under conditions of rapid economic growth and expanding populations, which allowed workers to contribute less than they would eventually receive in benefits. In Japan, however, economic and population growth ended in the late 1980s. Among the most demographically challenged in the world, today's aging Japanese population means pension and interest payments consume half its government's annual budget. "As the government has spent more and more to support its growing elderly population, Japanese savers have willingly financed ever-increasing public-sector debts,"[80] write Johnson and Boone. But while other countries like Norway and Singapore have invested their national savings abroad, Japan has instead used private savings to fund current spending. "… Japanese savers are essentially tendering their savings in return of newly issued government debt, which is not backed by hard assets. It is backed only by an aging, shrinking population of taxpayers."[81]

Determined to reverse course, the world's third largest economy elected a new prime minister in 2012 with a three-point plan. Shinzo Abe's "Abenomics" consisted of aggressive monetary easing, a fiscal plan, and structural reforms. QE, a well-worn tool during the lost decades, and Japan were well acquainted, but now Abenomics would aim to double the monetary base within two years with a commitment to the purchase of an astonishing $140 billion a month in 2014, which is practically twice the amount of Federal Reserve net purchases

($85 billion a month) and five times the share of GDP. Not since the early 1930s when finance minister Takahashi Korekiyo pulled Japan out of the Great Depression with a combination of monetary and fiscal stimulation, a 40 percent devaluation of the yen, and the Bank of Japan funding a public works program, had anything so daring been tried. Writing in June 2013, the program appears to be working: between January and May, the stock market increased by more than 35 percent creating the desired "wealth effect" that has proved helpful to consumer sentiment in America while a lower yen, with declines of 24 percent, was working its magic on exports. Labour market reforms and free trade agreements with neighbours in the Pacific region were also promising. Only demographic challenges needed to be addressed, but perhaps prudent immigration policies and the provision of an economic future for Japan's young would steer this issue in the right direction. Even so, and even as the world marvelled at the magnitude of the task ahead, many openly worried about the risks involved where nothing less than the full collapse of the yen was emerging as the most likely outcome of Japan's debt crisis.

When the Japanese no longer save in a yen-denominated asset, rising interest rates, worsening capital positions of banks, insurance companies, and pension funds, and fears of insolvency will result. Debt that is held by the government's citizenry is no panacea, particularly when half of all tax revenues are needed to service it. It did not help in Weimar Germany or post–Berlin Wall Russia where the elderly lost their savings to high inflation. It did not help Takahashi's miracle remedies in the 1930s, which ultimately succumbed to hyperinflation and military resistance to necessary cutbacks. The result, then, was fascism and his assassination. Dr. David Asher, a world-renowned expert on Japan, observed in *The Boeckh Investment Letter* that "the government's debt ratio is almost four times what it was before the start of Takahashi's economic policy. Failure of Abe's government to bring the deficit down quickly will prove very risky."[82]

Just as Japan loses its ability to meet its pension and other obligations, savers could lose all to inflation or bank failures. Or, as Asher observes, "if 'financial Mt. Fugi' (Japan's debt mountain) ever does blow its top, the ramifications for the Japanese people will be dire. There is no gain from defaulting or rescheduling debt payments as there would be if foreigners were significant holders. If they default, it would be on themselves. This would be extraordinarily inflationary as the central bank would be forced to buy most of the debt – essentially a debasement of their currency and national stock of wealth."[83] While this kind of crisis, already under way in the eurozone, looms in Japan,

no country in the developed world is immune. Johnson and Boone conclude that much in the way elderly Japanese refuse changes to their pension system, "the euro elite have closed their eyes to the unsustainability of their currency union. And the U.S. has Wall Street in the driver's seat. We all have political systems that have figured out how to promise far more than can be repaid …"[84]

Pound Sterling Crisis

It's a bond fire of the currencies – the devaluation race is in full gear.

–NED GOODMAN[85]

James Rickards hypothesizes that, if any currency collapses, it will be the pound sterling. He argues as follows: The Bank of England was well ahead of the Federal Reserve both in terms of pursuing neo-Keynesian policies and in the belief in the effectiveness of quantitative easing. The BoE and The Fed are therefore like-minded in their economic approaches. The key difference between the two countries is that, if there is a currency crisis or collapse of confidence, the U.S. has 8,000 tonnes of gold to back up the dollar whereas the U.K. has no significant amount of gold relative to the size of its economy. And Europe has even more gold than the U.S. "So …if there is going to be a currency crisis sooner than later, I see it happening in the pound sterling, partly because of quantitative easing not backed up by any gold.[86]

Currency Wars

Competitive devaluations provide only temporary export price advantage.

–JOHN BUDDEN[87]

The notion that a currency war might be under way officially arrived on the global agenda when Japan entered the reflation game in early 2013. Having endured deflationary stagnation since the Nikkei crash of 1989 and a debt to GDP ratio of 230 percent, Japan's decision to achieve a 2 percent annual inflation rate by weakening its currency and strengthening asset prices was hardly preordained, but was also hardly surprising since everyone else was doing it (and doing it, more or less, since the 1960s, but particularly in the 1970s in the U.S. when Nixon "closed the gold window").

More recently, in 2011, Switzerland – fed up with being a safe-haven destination whose currency strength rendered its exports uncompetitive – pegged its franc at a rate of 1.2 against the euro, which resulted in a prompt 26 percent gain in the stock market while talk of cutting rates by the Reserve Bank of

Australia resulted in gains for its index. As for Japan, with the yen weaker by 20 percent, the Nikkei 225 surged over 30 percent in three months.

Observers were spooked by this development because, as J. Anthony Boeckh explained, the "easiest way to obtain growth in a depressed, troubled balance sheet, fiscally constrained economic world is to steal it from other countries. Devaluation causes exports to cheapen and import prices to rise."[88] Of course, it works only if other countries don't retaliate. In early 2013, the Bank of Japan, the U.S. Federal Reserve, the Bank of England, the Swiss National Bank, the Reserve Bank of Australia, and several Scandinavian countries were in full print mode.

The term "competitive devaluation" was first used in the 1930s when the U.K. left the gold standard. The pound sterling dropped 25 percent and the economy immediately started to improve. Today, monetary expansion is widespread as sovereign debt loads and fiscal deficits leave most countries with little room to use any other measures.

Analysts are divided about its potential outcome. (See above.) Reflationary efforts have kept a global depression at bay. Boeckh argues that the lessons of the Great Depression not only have been learned but also have been applied. And, according to Paul Krugman, "what Japan, the U.S. and the U.K. are doing is in fact trying to pursue expansionary monetary policy, with currency depreciation as a byproduct. Expansionary policy is what the world needs, so why is this a bad thing?"[89] On the other hand, and in the longer run, inflation or even hyperinflation may result as might an escalation from currency wars to trade wars, as is now probable given that, in June 2013, Europe imposed anti-dumping levies on Chinese solar panels. In the 1970s, for instance, it led to a six times increase in the price of oil and borderline hyperinflation.[90] (See also Japanese Yen Crisis above.)

1970s or 1930s?

Both. Now we are experiencing some of the deflationary forces of the 1930s, but, beware, it will evolve into the inflationary extremes of the 1970s.

–JOHN BUDDEN[91]

Long-wave theory clearly establishes that the Western economies, led by the U.S., are in or nearing the bottom of the trough of a deflationary depression such as that experienced in the 1930s Great Depression. That it does not "look" like a great depression is hardly reassuring because, as Martin Taylor,

chairman of agricultural seed giant Syngenta, has observed, similarities with the interwar period abound. From today's bankers who, like the plutocrats of Weimar Germany, are despised and scapegoated, to the false belief that the rich can pay for the damages, from the debate about austerity versus full employment, to the need to exact "reparations" from the peripheral EU countries, from the rearming of rising nations, to the weakening of the international order as the U.S. turns sour and inward, Taylor concludes that "working to a large extent together, the major central banks are applying palliative care on an unprecedented scale to the world economy. De-leveraging is still in its early stages, and the evil day, or decade is being put off. This warm bath of liquidity not only helps the financial markets strengthen, it disguises from many of the victims of the crash the extent of the loss of wealth that the crash has engendered."[92]

Unemployment statistics speak even more eloquently to the situation in Europe, where by 2012, every country with unemployment rates over 10 percent have changed governments: Spain (23 percent), Greece (21 percent), Ireland (15 percent), Portugal (14 percent), and Slovakia (14 percent).[93] Youth unemployment is stratospheric with Spain topping out at over 50 percent.

Compare these statistics with U.S. unemployment in 1933 at 25 percent of all workers and 37 percent of non-farm workers.[94]

Barry Eichengreen sees parallels with both the 1930s and the 1970s.[95] Like the 1930s, when the dollar and the pound sterling dominated, today the dollar and the euro account for 90 percent of global central banks and governments' foreign exchange reserves.[96] The Stanford economist and noted authority on reserve currencies argues both periods threatened the international monetary system, but, while the U.S. dollar, economic growth, and stability survived President Nixon's abandonment of the gold standard in 1971 and the inflation that followed in the wake of both unlimited liquidity and rising oil prices, Britain's departure from the gold standard in 1931, following the Credit-Anstalt bankruptcy, led instead to the beginning of an international monetary crisis as capital flows forced Britain, then the U.S., to raise their interest rates. In the U.S., the 1929 crash and crisis of output and employment now turned into a financial crisis. With a deep recession already under way, higher interest rates meant credit was curtailed, causing businesses to close and banks to fail. Off the gold standard, Britain could reflate but, having chosen austerity and higher taxes to restore economic health, recovery was tough.

Ambrose Evans-Pritchard of *The Telegraph* argues that the euro is a latter-day form of the gold standard that handicaps those peripheral EU countries

in need of the ability to have their own currency and set their own monetary policies. Though Eichengreen suggests either a '70s or a '30s monetary crisis is in play today, his ideas for a new reserve currency are a de facto concession to the 1930s scenario, which after World War II produced the Bretton Woods agreement. With Russia, China, Iran, and others doing end runs around the dollar for trading purposes, a key difference today may be the evolutionary development of a new reserve currency, not the limboesque hodge-podge of currency machinations that took place following Britain's departure from the gold standard in 1931.

That the trough of this Kondratieff Winter can be long and drawn out (Japanification), deepened precipitously (EU breakup, dollar collapse), or cut short (innovation/energy breakthrough), goes without saying. Any combination of policy initiatives or Black Swan events can cause these. It may well be, however, that the real question is not "1930s or 1970s?" Writing in 2012, the question is "1931 or 1937?" It is clear the central bankers have delayed, but not necessarily prevented, those events that would, like the Credit-Anstalt bankruptcy in 1931, plunge the global economy into the worst effects of a Deflationary Great Depression. Some argue, however, that the Lehman collapse was our 1931, and that subsequent fiscal and monetary policy initiatives, which have created rising stock markets, mirror the upswing that took place between 1933 and 1937. When stimulus was withdrawn in 1937, the third leg of the Great Depression was triggered. Though markets plunged, they did not match the lows of 1933. This scenario is of course consistent with most renditions of the Fourth K-wave where the 1987 stock market crash was our equivalent of the 1920 recession; the 2000 dot-com bubble was our 1929; and the 2008 Lehman crisis and crash were our 1931.

To be sure, we live in a time when the flow of ideas, events, and developments, thanks to instant communications, take place at warp speed. Developments that required ten years in the '30s might be compressed into two at the beginning of the twenty-first century. Take your pick, 1931 or 1937; either way, worse is yet to come. Yet parallels, such as the possibility of an oil spike or stagflation, with the 1970s are not inconsistent with a deflationary Great Depression and are certainly relevant, to the extent that they can affect the long wave's movement through the trough of this Kondratieff Winter and provide watch points as well as lessons with which investors may defend themselves or even profit.

Oil Spike/War in the Middle East

Two thousand years ago, it took centuries to embed an ideology, but today, with smartphones, it can happen overnight.

–JOHN BUDDEN[97]

Free of the gold standard in 1971, U.S. money printing led to rises in the price of gold and stocks, as well as inflation. The maximum allowable interest rate of 8 percent, then in play, put costs of the Vietnam war over the top. By 1973, with the troops out of Vietnam, the public war-weary, and the Watergate Scandal brewing, Egypt and Syria saw an opportune time to move on Israel. Nixon's response, however, to the Yom Kippur War, which took place in October of that year, was to intervene on Israel's behalf. The Saudis responded with an oil embargo, doubling world oil and gasoline prices. Though the Dow rose by 35 percent in one eighteen-month period, a global recession was its other effect.

Following military engagement in Iraq by two Bush presidencies and troop withdrawal under President Obama, trough wars are under way throughout the Middle East where the Arab Spring has sparked a string of changes in political leadership while Israel renewed its offensive in Gaza. The price of oil, however, has come into clear focus as Iraq, with its production of over two million barrels of oil a day, has been invaded by Islamic insurgents.

As in the '70s and 2008, when prices peaked, an oil price spike could plunge the global economy into the next leg of this depression, though with American oil production having increased by 3 million barrels per day to 7.6 million barrels per day in 2013, the highest in a quarter of a century,[98] the shale gale has reduced U.S. dependence on imports, making it less vulnerable to price shocks. Yet as Larry Jeddeloh pointed out in August 2013, "if oil does spike, who gets hurt? Eleven years ago, China was affected by a spike, then in 2008 when oil hit $145, I think China's economy nearly rolled. But not like it would roll now. $145 oil with an import bill of three million bpd would cost China almost half a billion dollars daily. How would they fund that?"[99] Indeed. And just what, we might also ask, would happen to the global economy if China ceased being a key driver?

If the major powers cannot afford an oil spike, neither can they afford a global conflict (see chapter six, War: The Ultimate Economic Crisis) through a horrific trough war, confined to the Middle East, even as the anticipated death of King Abdullah could bring down House of Saud and, with it, the petro-dollar, which has served as the foundation of the U.S. dollar for over forty years. In addition, new energy cartels are forming, this time consisting

of various combinations of Gazprom of Russia, Qatar, and Iran in the Persian Gulf; Turkmenistan; and Israel.[100]

Under the circumstances, it was hardly surprising when *Der Spiegel*'s China correspondent, Bernhard Zand, called in October 2013 for China, the world's largest importer of Middle Eastern oil, to "take on responsibility as a world power."[101] Yet no one seemed to notice this latest dig at America's waning geopolitical influence, now rapidly being supplanted in Central Asia by China, whose own influence is all but assured as its proposal to build a "New Silk Road" of roads, rail, pipelines, and a broadband of infrastructure that builds on ancient trade routes linking China and the Mediterranean areas gets under way.

Stagflation

And when inflation rises above ten per cent, one finds oneself in a different world.

–WILLIAM REES-MOGG[102]

In 1973, OPEC used its monopoly to force oil prices higher. A year later, in the United Kingdom, a miners' strike led to a crisis in the electricity supply. The FT index, by the end of the year, was down by 50 percent and inflation had risen to 19 percent. Increases in the money supply, based on the belief that "a little inflation is good for you," had resulted in the phenomenon known as stagflation: that is, rising prices but low growth, a phenomenon that enveloped most Western economies where the universal bandage of the time was wage and price controls.

With British inflation reaching 5 percent in 2011, and at the cutting edge of this issue in global terms, parallels with the 1970s seemed apparent. Though trade union militancy is no longer as big a factor either in the U.S. or the U.K., recent increases in the Valued Added Tax are a factor, while a decrease in its Canadian equivalent, the General Services Tax, may be a factor in maintaining lower inflation in Canada. Additionally, the Bank of England has been a conspicuous purveyor of quantitative easing, or attempts at increasing the money supply. As elsewhere, this will inevitably find its way into various sectors and, in turn, increased prices for food, housing, heating, and transportation.

So, while increasing the money supply may or may not avert a Deflationary Great Depression and may or may not cause hyperinflation, it could very plausibly create the twilight zone of stagflation with the economies of the world going nowhere while prices go up.

Stagflation places policy-makers in a conundrum: inflation is normally controlled by raising the interest rates; low interest rates, however, are needed to stimulate growth. In the 1970s, prices rose 20 percent while interest rates hit 15 percent. With a growing realization that a post-2008 recovery is all but non-existent everywhere except the stock market (which, being liquidity-driven, will require more and more "juice" to get smaller and smaller effects), fears of stagflation are beginning to emerge. In the stagflationary 1970s, five years passed before U.K. inflation fell and the pound sterling recovered.

The key difference between post-2008 economies and the 1970s is today's staggering sovereign debt levels. Any rise in interest rates would render them unserviceable and push them, as well as exorbitant debt held by corporations and mortgage and margin holders, into default.

The End of Growth

The growth rate is a heavy taskmaster. We need innovations that are eight times as important as those we had before.

–ROBERT J. GORDON[103]

In his book *The End of Growth*, published in 2012, former Canadian Imperial of Bank chief economist Jeff Rubin hypothesized an end-of-growth scenario predicated on high oil prices. In a paper published in August of that year, Northwestern University economist Robert J. Gordon argued that growth is not a continuing process. The spectacular increase in growth over the last two hundred and fifty years, he says, was a one-off event that peaked in the mid-twentieth century as the full effects of electricity, the internal combustion engine, and indoor plumbing took hold.

"After 1970 productivity growth slowed markedly, most plausibly because the main ideas of (industrial revolution # 2) had by and large been implemented by then."[104] Parrying questions about the purported changes brought by the information age, he asks what the questioner would choose – the internet or indoor plumbing? You see his point. The computer and internet revolution made its primary impact on productivity in the 1970s and 1980s while today's communication devices do little to change the standard of living or increase productivity. Innovation will continue, he writes, but much more slowly due to declining demographics (which means fewer hours of work and output per capita); poor standards of American public education; continuing competition for U.S. labour through outsourcing; high energy and environmental costs; and household and government deficits. The bottom line? "The

growth rate is a heavy taskmaster," he says. "We need innovations that are eight times as important as those we had before."[105]

Dr. Tim Morgan, the former head of Global Research for Tullett Prebon, a London-based inter-dealer broker specializing in trading in the wholesale financial markets, makes Gordon and Rubin look like pikers in the no-growth prediction game. The following section reprised from *The Production Crisis* demonstrates why. Writing in January 2013, Morgan explains that the economy is a process of energy inputs and outputs and that money (and he might indulge me the suggestion that this applies to innovation also) merely tokenizes that process. This has been true since prehistoric times when the amount of energy expended in order to hunt for food roughly equaled the energy regained once the prey was consumed. Life in this context was all about hunting and gathering. During the agricultural age, that equation shifted as fewer people, and hence energy inputs, were required to grow food, thereby releasing others to create capital goods in the form of implements and infrastructure upon which even more energy could be leveraged and, eventually, to engage in trade. But throughout history, the equation and the critical issue about the economy has remained the same. It isn't the amount of energy available that is important; it is "the relationship between energy extracted and the amount of energy consumed *in the extraction process*" (emphasis added). Quantified as the Energy Return on Energy Invested (EROEI), this is "the killer equation where the viability of the economy is concerned," writes Morgan.[106] In other words, while hydro power will produce 100 units of energy for 1 unit of energy used for extraction, oil sands and shale gas/oils produce less than 10 units of energy for one unit of extraction costs. And, while most of us are prepared for energy scarcity and higher prices, few of us are prepared for the real implications of a low EROEI economy whose costs in terms of GDP become overwhelming. Profit margins at this level fall off the cliff, and so does the economy that depends on such sources. We are, he warns, now very near the edge of that cliff.

Approaching the issue from different vantage points, Gordon and Morgan reach the same conclusion: using the year 1750 as the starting point, growth (including population) gained momentum at the beginning of the twentieth century, peaked in the late twentieth, and is now in the process of ending. While Gordon sees this as a function of key one-off innovations unlikely to be replicated, Morgan sees this as a function of the end of cheap energy, namely coal, oil, and gas, and the high EROEIs that fuelled those innovations. In other words, the innovations would not have been possible without having the

energy available in the first place. Conversely, innovations fail or disappear if the appropriate energy source is unavailable.

Morgan might agree with Ludwig von Mises who, in 1949, said, "What is needed for a sound expansion of production is additional capital goods, not money or fiduciary media. The credit boom is built on the sands of banknotes and deposits. It must collapse."[107] Only by addressing problems in the real economy, rather than concentrating on monetary issues, will today's economic problems be solved. This starts with an appreciation of the fact that the physical economy is a function of the surplus energy equation.

If Gordon and Morgan see an end to growth, Harvard professor Dani Rodrik concludes that, at a minimum, we will see an end to growth miracles. Hopes that Asia and Africa will provide the engine for global growth are giving way to what *The Economist* has called "the great slowdown" as China, India, Brazil, and Turkey, in 2013, post the weakest growth performance in years. Growth miracles, Rodrik explains, are sometimes the result of natural resource bonanzas, but rapid industrialization has usually been key. Japan, South Korea, Singapore, Taiwan, and China, following the recipe perfected by England, the U.S., and Germany, have excelled by moving labour from the countryside to organized manufacturing based on easily copied foreign production technologies. This explains why India, which has made inroads in providing services in software and call centres, has lagged. Most workers remain on the land or in petty services. But even rapid industrialization will peter out without the institutional strength to back it up. Regardless of policies, institutions, or geography, turning "farmers into factory workers reaps a huge growth bonus," he writes, but while "a poor country can easily compete with Sweden in a wide range of manufactures, … it takes many decades, if not centuries, to catch up with Sweden's institutions." Moreover, advances in technology mean even low-quality manufacturing will suffer as fewer companies are able to meet new skill and capital-intensive requirements. Even if they were able to compete, many Western countries struggling with "high debt, low growth, unemployment and inequality … will apply greater pressure on developing nations to abide by World Trade Organization rules …"[108]

Social Unrest

Hungry, angry young people can do a lot of damage. Bad economics makes for dangerous politics.

–JOHN BUDDEN[109]

Writing in April 1931, Erich Koch-Weser, former minister of justice of the German Republic, then leader of the Democratic Party, observed how economic distress leads to a situation in which the individual uses his power to help himself. The idea of political liberty pales before his idea of political equality. Under such circumstances, he wrote, the political system is doomed to failure. In a world ruled not by reason but by passion, a man in despair is driven to smash everything in the hope a better world may result.[110] Inequality, underscored by an angry sense of injustice, is today's rallying cry across Europe. Governments have changed overnight and, in parts of the U.S. and even Canada, student unrest has attracted the world's attention. Part of the reason behind this is hardly a mystery. Youth unemployment in Europe is soaring. Fifty-eight percent of Greek youth were unemployed in November 2012 with similar numbers for unemployed Spanish youth. And despite official figures that spurred hope in the U.S., Shadowstats figures for unemployment, which take into account long- and short-term discouraged workers, remained at 23 percent overall. In other words, near those of the Great Depression.[111]

Though, historically, young males are sociologically the most likely to engage in riotous behaviour, they aren't the only ones flooding the streets of Europe; others are joining them to oppose draconian terms being imposed on bankrupt EU nations that will leave most of them jobless and with lower pensions. While all the ingredients are present for a French-style Revolution, an unending succession of EU summits backstopped by some still-workable welfare arrangements are keeping at least a few fingers in the dyke. Similar forces are at play in the U.S., though the EU crisis and a presidential election have kept people preoccupied even though this Kondratieff Winter and its 2008 aftermath have clearly increased inequality. Top earners and corporate profits have fully recovered – America's top twenty-five hedge-fund managers amassed $25 billion in total personal earnings in 2009, more than they earned in 2007 – while everyone else is languishing in neutral or reverse.[112] All bets are off, however, in the future. "We saw it in London," Jim Rogers said in an interview. "We've seen it in several countries in Europe in the last year or two. Yes, I expect to see it here too."[113] And like Dean LeBaron, Peter Schiff, the prolific author and outspoken American economist, fears for basic liberties.

"My biggest worry is that capitalism and the free markets will get the blame when it really hits the fan," he told *Kingworld News*. "Then we just finish our journey on the road to serfdom. We totally become a totalitarian, centrally planned, police-type state, where Constitutional rights go out the window."[114]

In this scenario, the theory goes, the crisis will reach its nadir either through a stock market crash, a collapse of the dollar, the end of the Federal Reserve and fractional system of banking, or a wholesale revolution that results in a reformed constitution and a new monetary system.

Ellen Brown, a Los Angeles attorney who has turned her skills to analysing the banking system, provides a step-by-step scenario of how social unrest could arise in your town or mine. As she explains, both U.K. Prime Minister Gordon Brown and U.S. Treasury Secretary Henry Paulson were concerned that, at the height of the banking crisis in 2008, the imposition of martial law might be necessary. "If the banks are shutting their doors, and the cash points aren't working, and people go to Tesco (the grocery chain) and their cards aren't being accepted, the whole thing will just explode," Brown worried. "If you can't buy food or petrol or medicine for your kids, people will just start breaking the windows and helping themselves. And as soon as people see that on TV, that's the end, because everyone will think that's okay now, that's just what we all have to do. It'll be anarchy. That's what could happen tomorrow."[115]

In 2008, the banks were bailed out and, in any case, what triggered the crisis was a run in the shadow banking system, Ellen Brown explains, not the conventional system with which most of us deal. The shadow banking system is a collection of unregulated intermediaries – hedge funds, money market funds, credit investment funds, etc. – through which the conventional banks may also conduct their business. The problem today is that the shadow banking system is bigger than ever and, should another crisis arise, no bailouts will be available. Rather, the Financial Stability Board has established regulations that require such banks to make plans for how in this eventuality they will deal with insolvency – including the requirement that they "bail-in" their creditors, of whom the largest numbers are depositors. "When depositors cannot access their bank accounts to get money for food for the kids, they could well start breaking store windows and helping themselves."[116]

This kind of scenario can't be dismissed as impossible in the culmination of a Kondratieff Winter, for while it is wise to take extreme prognostications with a pinch of salt, it is equally wise to pay attention. If extreme events in history have been avoided, it is because someone dared to articulate their possibility, and someone then acted to prevent them. Remember Y2K? If

you have forgotten the doomsday scenario surrounding the conversion of all computer systems in the year 2000, it is because someone acted to ensure it did not happen. Also, you might just want to be prepared and then hope it doesn't happen. (See also Your-Too-Big-to-Fail Bank Fails below.)

Bond Bubble

At near zero or even negative interest rates, why would anyone in their right mind park their savings with a government for thirty years?

–JOHN BUDDEN[117]

David Stockman is a former Republican Congressman and director of the Office of Management and Budget during the Reagan administration. Of all the scenarios that might play out, his is the bleakest: having endured a thirty-year debt super cycle, he says, things are now being made worse by quantitative easing, which facilitates more public-sector borrowing while preventing debt liquidation in the private sector. It is not the role of the Federal Reserve to be the central planner of a $15-trillion economy. Interest rates and yield curves mean nothing because they are manipulated by the Fed, while Wall Street arbitrages monetary policy by borrowing overnight money at 10 basis points and investing it in ten-year treasuries at a yield of 200 basis points, capturing the profit and laughing all the way to the bank. "The Fed has become a captive of the traders and robots on Wall Street," he says.[118] The catalyst for the end game will be a breakdown in the U.S. government bond market, the heart of the world's financial markets. The minute the hedge-fund traders and fast money boys lose confidence in the Fed's ability to keep everything pegged, they will unwind their trades. Then, the repo trades, that is, debt owned by still more debt, will start to unwind and create panic in the Treasury market. People will realize the emperor is naked. Like 2008, there will be a thunderous collapse. When the crisis comes, there will be insufficient private bids – the market will gap down hard unless the central banks print enough to buy on an emergency basis: the Fed, the ECB, the People's Bank of China, and the rest of them. But will they do that, given they have already expanded their balance sheets? The Fed balance sheet was $900 billion when Lehman crashed in September 2008. Bernanke then added another $900 billion in seven weeks and then took it to $2.4 trillion in an orgy of money printing during the initial thirteen weeks after Lehman. By May 2012 it was nearly $3 trillion. Can it triple again? Stockman does not think so. Worldwide it is the same story: the top eight central banks had $5 trillion of footings shortly before the crisis. They have $15 trillion today.

Overwhelmingly, this fantastic expansion of central bank footings has been used to buy or discount sovereign debt. This was the mother of all monetizations. The mayhem that follows will be everywhere. Once the bond market starts unravelling, there will be a massive sell-off in all other asset markets.

> I think everything in the world is overvalued – stocks, bonds, commodities, currencies. Too much money printing and debt expansion drove the prices of all asset classes to artificial, non-economic levels. The danger to the world is not classic inflation or deflation of goods and services; it's a drastic downward re-pricing of inflated financial assets.[119]

There is no way to prevent this kind of unravelling, Stockman concludes, When the crisis comes, torches and pitch forks will move in the direction of the Fed offices. The only thing to do is to stay out of harm's way and preserve cash. All the markets are rigged or impaired. A 4 percent yield on blue chip stocks is not worth it, because when the thing falls apart, your 4 percent will be gone in an hour. Even if the government keeps printing money, there will be no hyperinflation. The financial system will break down before it can even get started. Then the economy will go into paralysis until we find the courage, focus, and resolution to do something about it. Instead of hyperinflation or deflation, there will be a major financial dislocation, which means painful repricing of financial assets.

Stockman's investment model is ABCD: Anything Bernanke Cannot Destroy: flashlight batteries, canned beans, bottled water, gold, a cabin in the mountains.

China's 1929

So far, China has maintained its disciplined approach to shadow banking, but all good things must come to an end.

–JOHN BUDDEN[120]

In 2001, Gordon G. Chang predicted that China would collapse in 2011. In 2013, with the Communist regime still in place, he remained unrepentant. Back in 2001, accession to the World Trade Organization carried obligations that, since then, China has largely ignored, with the result that its home market remains protected from foreign competitors while exports continue apace. Double-digit growth followed, with the IMF predicting it would surpass U.S. growth by 2016.

Not a chance, retorted Chang. China's three-decade supercycle is over. Deng Xiaping's transformational "reform and opening up" policies of the 1970s

have disappeared, while the benefits of globalization and the "demographic dividend" resulting from an extraordinary bulge in the workforce are on their way out.[121] The market crash of 2008 ended a global boom that welcomed Chinese integration into the world economy, even though it pursued mercantilist (trade aimed at export growth only) policies. Now, every nation wants to export more, even as global demand declines. This will hurt China, a nation that could also be the biggest victim of the eurozone crisis – a trend confirmed by a *New York Times* story about increasing inventories and decreasing sales, including of automobiles.[122] Demographically, it has one of the world's worst profiles with the workforce beginning to level off and, in the longer term, with fewer people to move to cities and work in factories – an analysis confirmed by the Bank of Japan which, in 2012, reported that the surge in Chinese home prices had surpassed extremes seen in Japan in 1990 when its real estate bubble popped. Combined with a demographic tipping point, it said, in which the ratio of workers to dependents decreases, the "Japanification" of China is all but certain.[123] All this before it has had a chance to increase the productivity levels that have sustained the Japanese, U.S., and German economies. For instance, it takes one hundred million Chinese to produce $1 trillion in goods, something the U.S. accomplishes with only ten million workers.[124]

At the same time, continues Chang, it must recover from dislocations, asset bubbles, and inflation, caused by history's largest stimulus programs in 2008 and 2009. Since September 2011, all economic indicators are down, and money is leaving the country. The result will be either a crash or a Japanese-style multi-decade decline, he concludes, a possibility given added weight by statistics showing residential property prices at 12 percent of GDP – higher than the 8 to 9 percent of GDP for emerging nations generally, combined with suspicious loans in the non-bank lending sector. Though China can bail out its banking system and property market, it could get caught in a "perfect storm" in which it is hit by an external shock and policy errors.[125] All this, just as Chinese society is becoming restless. According to one count, there were 280,000 "mass incidents" in 2011. This means the Communist party leaders cannot hang on. A Chinese Spring, not to be confused with a Kondratieff Spring, could then be in the offing. How peaceful it would be and what effect it would have on countries relying on exports, particularly of commodities, to China would then be a global concern. By June 2013, he was predicting China's "Lehman" moment was at hand as China's regional banks underwent a liquidity crisis.

Chang's scenario gained traction in 2014 as fund managers surveyed by Bank of America Merrill Lynch considered a debt default in China as the biggest risk to investors. A reversal in China's corporate sector, which with U.S.$14.2 trillion in debt outpaced the U.S. debt at $13.1 trillion at the end of 2013, would affect not only multinationals for which China provided an increasing share of profits but also resource economies such as Canada where over half of publicly traded companies were tied to the resource sector.[126]

Little in this scenario changed when, in 2015, China edged past the U.S. to become the world's largest economy in terms of output (though not in terms of per capita GDP). Indeed, a worse scenario remains possible – one that could see China, after decades of warp-speed growth, reaching its Kondratieff Winter – one that is as brutal as that which arrived in Stalin's Russia where holus-bolus industrialization took precedence over incremental reforms in agricultural and industry. Mobilizing farm labour into manufacturing jobs, combined with large investments in capital equipment and infrastructure, produced large increases in output in the Soviet Union of the 1950s; however, if, like Russia, China does not focus on efficiency, innovation, and economic return, never mind democratic accountability and the rule of law, not only is a Chinese version of 1929 possible, but so too is a confluence of forces that suggest a Soviet Union style–collapse.[127]

Liborgate

In order to keep the party going, banks and governments are in cahoots to maintain interest rates near zero. Meanwhile, savers' wealth is being transferred to speculators.

–JOHN BUDDEN[128]

The global economy may not have to wait for a European bank or sovereign default to experience Armageddon; rather, Liborgate may achieve this all by itself. The London Interbank Offered Rate is the average interest rate calculated by the British Bankers' Association to indicate the cost on short-term funding for highly rated banks. Since the 1980s, when it came into existence, it has underpinned trillions of dollars of derivatives and loans, including mortgages and other credit instruments. This changed in 2005 when low-level traders attempted to manipulate the rates, and again in 2007 when banks reduced rates to avoid appearing risky. Despite knowledge as early as 2007 that these manipulations were under way and, given that rate setting involves the making of a judgement call, suggested reforms were not implemented. When

the scandal finally broke, Bob Diamond was removed as CEO of Barclays Bank, a key player in the Bankers' Association, while the bank itself was fined $450 million. Absence of evidence of wrongdoing by either the individual or the institutions has done little to assuage the hue and cry that surrounded the universal verdict of "rate rigging" that took place.

James Rickards explains that, while regulators everywhere rush to promise overdue reforms, rate rigging, notwithstanding that it reduces interest payments on our cars and our houses, could prove the greatest fraud and potential liability for the banking industry in history simply because it is so big.

> Estimates vary, but $500 trillion seems reasonable. Even if the banks lied by as little as one tenth of 1 percent, that percentage applied to $500 trillion multiplied by the six years of the fraud comes to $3 trillion stolen from customers. Cutting that amount in half to allow for the fact that some customers benefited from the fraud while others lost still gives implied damages of $1.5 trillion, greater than the combined capital of all of the "too big to fail" banks in the U.S. Taken to the full extent of the law, these damages are enough to render a large segment of the global banking system insolvent. These damages will be pursued not by regulators, but in private lawsuits by class action lawyers.[129]

The London Whale

These days you can't keep a bad bank down.

–JOHN BUDDEN[130]

See above. JP Morgan's $2 billion trading loss involved some $100 billion in asset-backed securities and structured products – that is, the same complex and risky bonds that triggered the financial crisis in 2008, as well as holdings in credit derivatives. The trade took place in JP Morgan's London offices. "Whale" refers to the size of the trade. The architecture of the financial deal that took place was beyond my understanding, but the principles at issue can be understood by anyone. Should a bank be allowed to invest, hedge, or otherwise handle depositors' money, even if insured, in a way that could bring down the whole banking system as well as put taxpayers on the hook for its bailout? If the depositor is also a taxpayer, he is on the hook twice.

MF Global

With a quadrillion dollars worth of derivatives out there, what happens if the liquidity dries up? All of a sudden you've got a "who-to" market, and if you want to sell your position, you can't. It will make MF Global's demise look like a picnic.

–JOHN BUDDEN[131]

The largest Wall Street firm to collapse since Lehman Brothers, in 2008, and the eighth-largest in U.S. history, MF Global was a major financial derivatives and commodities broker that went bankrupt on October 31, 2011. By using borrowed money to buy European sovereign debt, the scandal involved the use of $1.2 billion of investor money which was commingled with the firm's borrowings of $6.3 billion. Defaulting bond purchases created a huge liquidity crisis at the firm, washing away investor money that could not, after the fact, be located. The issue was obscured by the fact the firm was using off-balance-sheet accounting methods which enabled it to keep risky transactions off the books. Questions have since been raised about whether MF Global circumvented securities rules at the expense of its clients. Arcane mechanisms it used to finance its purchases are also coming under scrutiny by agencies such as the Financial Accounting Standards Board.

High Frequency Fiasco

Lots of clever young high-frequency traders are flipping millions of shares for a penny a share. The high volume (creates) high profits, but if banks cut back on activity, anyone left has less volume and more volatility.

–JOHN BUDDEN[132]

Automation is on the verge of converting our electronically controlled trading platforms into electronic nightmares that could lose investors billions. Where once long-term value investments, based on corporate fundamentals, commandeered the markets, today half of all trading consists of automated micro-trading bets lasting milliseconds. Purchased early and fast and then sold to the less agile, these trades earn their traders minute amounts on millions of even more minute transactions, usually in the form of buying or shorting stocks and betting for or against market momentum. As *Financial Post* columnist Diane Francis comments, "These high-frequency trades are not regulated and have begun to destroy the market,"[133] a point fully extrapolated and developed by Michael Lewis in his 2014 bestselling exposé *Flash Boys*.

The problem is not just the advantage such trades confer on the flash boys but also that even a small computer glitch can set a trade careening and so cause losses in the millions or even billions of dollars. That's what happened in August 2012 when a computer at Knight Capital bypassed U.S. Securities and Exchange Commission safeguards established after the May 6, 2010, Flash Crash that saw the Dow plunge 1000 points then miraculously recover – but not without triggering millions of stop-loss and buy orders along the way. Knight Capital, a very large player responsible for 11 percent of U.S. stock trading, made an incorrect bid which caused losses of almost half a billion dollars. Only a bailout saved the company.

In the words of CNBC stock expert Jim Cramer, "High frequency trades have a speed edge and weapons that are like machineguns in World War I and individual investors are foot soldiers, mowed down by a new technology they can't understand. The individual investor is fodder in the face of these fields of fire."[134]

Your Too-Big-to-Fail Bank Fails

Few of us own the assets that we think we own. Banks own them. Intermediaries own them.

–DEAN LEBARON[135]

The biggest question facing investors may not be what assets they own, but how they own them. This is the conclusion of the patrician New Englander and adventure capitalist Dean LeBaron who, in an October 2011 video,[136] points out his underlying strategy for the last ten years was to lose as little money as possible. Given this was a defensive strategy, it turned inadvertently into a money-making proposition: holding currencies other than the U.S. dollar and precious metals proved unusually correct, he tells his viewers. But defensive against what?

The aggregate value of investable assets in the world is thought to be around $80 trillion, about half of which assets are in the U.S. But the value of these are dwarfed by other promises, that is, derivatives, guarantees, and hedges against them, which are not measurable but which every expert agrees are worth substantially more than $80 trillion. The world is, therefore, simply unable to sustain the debt that it has. This means that, in the game of musical chairs in which the world economy finds itself, when the stimulus and quantitative easing music stops, investors rush for asset chairs that are increasingly fewer in number and which they eventually simply occupy or hide because

they know they won't be able to get a chair the next time the music stops. This leads to a critically important strategy, says LeBaron, one about which too few of us are aware or know how to correct. Few of us own the assets that we think we own. Banks own them. Intermediaries own them. We have become accustomed to electronic book entry whereby some financial institution, which is part of a continuum chain called counterparty risk, owns the assets. One's asset is someone's debt in this continuum chain, which is fine as long as the chain isn't broken.

Meanwhile, even if you own gold, it is probably in a repository with others in a bank vault. But you don't really own it because the bank owns it and it owes you the equivalent value of gold in its own name. What you "own" is in fact only a debt against the bank. Have you looked at what is happening to banks these days? he asks.

LeBaron then recalls how, when he first started in business, half his clients wanted to hold assets in their own names. It was extremely inconvenient, but they remembered the Great Depression in which banks failed. Today, some are failing but, given the extent of derivatives contracts no one can quantify, some are deemed "too big to fail."

Bank Deposit Confiscation/The Bail-In Mechanism

If a banking crisis hits, government-approved bail-in provisions allow your troubled bank to grab a portion of your savings and to compensate you with equally troubled equity.

– JOHN BUDDEN[137]

And if your too-big-to-fail bank does fail, watch out for your deposit. (See also Social Unrest above.) Nothing speaks more clearly to the probability of another catastrophic bank failure than the fact that global financial institutions are putting mechanisms in place to absorb and deal with the eventuality without having to use taxpayers' money. Their solution? Your bank deposit, your banking shares, or the bank's bonds that you hold, in effect, would be commandeered to prop up the teetering bank.

In December 2012, the Federal Deposit Insurance Corporation and the Bank of England suggested the template whereby depositors, as well as owners of a bank's equity and bondholders, would recapitalize and so become its owners: "thus, the highest layer of surviving bailed-in creditors would become the owners of the resolved firm … Such a resolution strategy would ensure market discipline and maintain financial stability without cost to taxpayers."[138]

The Cypriot crisis provided the first opportunity for experimenting with this formula, which, with little variation, has been adopted in other developed countries, including Canada and New Zealand, as well as the U.S., U.K., and the EU. Although, in Cyprus, only uninsured depositors were ultimately affected, where other banks are concerned, neither the FDIC/BoE paper nor local legislation appears to makes any distinction between insured or uninsured depositors.

In other words, banks would no longer be bailed out. Instead, our bank holdings, whether in the form of deposits, shares, or bonds, would be bailed in. Like other analysts, Jim Sinclair believes the probability of a bail-in is high, given that 90 percent of all derivatives contracts are controlled by five banks – JP Morgan Chase, Citigroup, Bank of America, Morgan Stanley, and Goldman Sachs – but that in a catastrophic event all major banks that engage in proprietary trading would be affected. So high that he urges his readers to simply get-out-of-the-system (GOTS). Another option is to move our money to a bank that does no proprietary trading, only retail banking, though even these banks may not sustain depositor confidence in a crisis.

Capital Controls

Switzerland's one-month reserve accumulation, due to the arrival of capital from the eurozone, was 10 percent of GDP and totalled over $400 billion of reserves.

–MOHAMED EL-ERIAN[139]

In a similar vein, LeBaron cautions that, as hot money flees Europe, we are sliding towards the imposition of capital controls. Individual liberty will then give way to collective apprehension and will doom what we think of as the capital system.[140]

While economists see capital controls – transaction taxes, regulating the flow of capital between countries, etc. – as another "tool," owners of capital should not be so sanguine. In a television interview, Mohamed El-Erian, former CEO of PIMCO, one the world's largest bond investors with $1.77 trillion under management in March 2012, admitted to being "stunned" at the amount of capital leaving the eurozone, particularly through people withdrawing money from their bank accounts. Switzerland's one-month reserve accumulation, due to the arrival of capital from the eurozone, was 10 percent of GDP and totalled over $400 billion of reserves, he said. This money is also going to Germany and the U.S. The problem, according to El Erian, is that

capital flight "sucks oxygen out of the economy (it is leaving) which then collapses."[141]

Bad Data

A good martini is $19 U.S., but there's no inflation!

–JOHN BUDDEN[142]

Dr. Tim Morgan of Tullett Prebon shares the concerns of John Williams of Shadowstats regarding statistical manipulation and argues that much statistical information has been undermined by changes in methodologies, thus severely affecting the accuracy of measurements of inflation, output growth, unemployment, debt, and fiscal data. Inflation measurements, for instance, have been altered by the introduction of concepts like "hedonics" – which allows for the cancellation of a price increase in a particular good if its quality has improved; "substitution" – which allows for the substitution of a cheaper good if the price of the first one rises (the cheaper price is factored in); and "geometric" – even though spending may be high in one sector such as health care, it may be given a lower weighting in the consumer price index. And this is *before* they exclude basic consumption items such as energy and food!

Over the three decades during which such metrics have been used in the U.S., inflation may have been distorted by as much as 4 percent. Instead of the 3.2 percent reported in 2011, it is likely closer to 7 percent.[143] The implications of this for the purchasing power of the dollar, calculations of wages, pensions, and other inflation-indexed benefits (and, of course, interest rates) are vast and explain why, while you and I are bowed under the rising cost of living, governments continue to produce low CPI numbers. Governments, of course, are the main beneficiaries of such policies. Wages remain lower, and the cost of servicing government debt also remains lower because most central banks are mandated to tie interest rates to inflation rates.

Another area of obfuscation is in unemployment figures that routinely omit workers who have left the workforce and those who have given up looking for jobs and ignore the age of those who are being employed. For instance, since January 2009, 4.3 million jobs went to Americans fifty-five and over, while everyone else lost 2.5 million jobs.[144]

A New Dark Ages

Complexity breeds complexity.

–JAMES RICKARDS[145]

In his Addendum chapter 12 to *Currency Wars*, James Rickards invokes two previous Dark Ages, namely the collapse of the Bronze Age civilization around 1200 BC, which lasted three thousand years, and the better-known collapse of the Roman Empire, which produced a Dark Age of about fifteen hundred years. Civilizations, he writes, are not linear but cyclical. Sometimes things get better, but sometimes they come apart, and quite possibly such collapses are the result of civilizational complexity. This complexity results from elites demanding more inputs to shore up their privileged status. In ancient times, it was through tribute, taxes, slavery, and spoils of war. In post-industrial societies, it is through inputs in the form of energy and money. This requires drilling farther and deeper for scarce resources, or seeking substitutes such as nuclear power. "When money becomes scarce we print more or seek substitutes such as swaps and derivatives. The result is an increase in the size, or scale, of society. Complexity breeds complexity."[146] The next collapse, he concludes, may be caused by Europe's failure to make the transition to an investment- and export-driven economy, the failure of the U.S. to reduce government spending and entitlements, or the failure of China to make the transition from over reliance on infrastructure to consumption-led growth – or all three.[147]

What will signal the arrival of a New Dark Ages? Antal Fekete describes one scenario leading to this eventuality: analysing the circumstances around Germany's request for a return of its gold reserves from American storage, Fekete, professor emeritus at Newfoundland's Memorial University, concludes that it was an American idea in the first place, one that the Germans are dutifully enacting not least because American troops remain on German soil even though Soviet occupying troops departed almost twenty-five years ago. Why would the Americans request this? Because, says Fekete, "the managers of the global fiat money system are preparing for the … final curtain on … *The Last Contango in Washington* … that is, policy-makers are trying to fend off permanent backwardation in the world's gold futures markets that is threatening to rip apart (today's) make-believe payments systems."[148]

Contango exists when the spot price of gold is at a discount relative to the price of futures (also known as "paper") contracts. In other words, when there is plenty of gold to meet demand. When the futures price loses its premium

relative to the spot price and goes to a discount, the situation reverses and is called backwardation. The measurement by which the change from contango to backwardation takes place is called the gold basis. Futures trading started after the U.S. left the gold window in 1971; at that time contango and the gold basis were at their peak, but the gold basis has since eroded, even though the price of gold has increased. This is because, as the price increases, the supply (the amount in circulation) of gold contracts. As a monetary metal, people and institutions simply hang on to it. As the price rises, it may disappear from circulation entirely.

We ignore the gold basis at our peril, says Fekete, because it is the only measure of the health of the fiat system and, after all, no fiat system has ever survived. Given the current, unrelenting contraction of the gold basis, the availability of gold for future delivery is in question. Eventually the supply could dry up and move into permanent backwardation. At that point, not even the gold miners will take paper money for their product and, of course, governments themselves become alarmed.

"Permanent backwardation means that confidence in fiat paper currency and government promises to pay have evaporated … all the king's horses and all the king's men cannot put Humpty Dumpty together again."[149] But the charade of plentiful gold must continue, hence the need to feed the market with central bank physical gold. Paper gold (exchange traded products and futures contracts) will not do, but, in any case, for the Americans to do the feeding is out of the question. Instead, the U.S. imposes on its satellite countries, including the U.K., Switzerland and, now, Germany, to do this. For this purpose the U.S. is happy to repatriate the German gold reserves in its possession. According to this "master plan," Germany is the "last fort of the crumbling global fiat money system."[150] Should permanent backwardation take hold, civilization would end and a new Dark Age (or hyperdeflation, as he refers to it elsewhere) would commence, and the threat of a sudden and complete collapse of world trade would ensue. A collapse of the dollar payments system would then follow. Barter would become the main vehicle of transaction.

Another Dark Ages scenario is suggested in *Dog Bone* chapter nine, in the section Sovereign Individuals and Virtual Nations in which is relayed Davidson and Rees-Mogg's description of a world where "before most nation-states collapse, they will be dominated by latter-day barbarians …(as) drug cartels, gangs, mafias, and triads of various sorts (proliferate) around the world … financing civil wars and insurgencies, … merging with commercial

structures, administrative agencies, interior ministry bodies, city authorities … creating narco republics …"[151]

To this we could easily add a scenario such as that typified by those who envision a world where fossil fuels have been depleted and the globe devastated by climate change. "Cities After Oil,"[152] by Adrian Atkinson, an internationally recognized urban and regional planner, describes how, by the end of the century, humanity could find itself surrounded by the detritus of modern civilization. The automobile, suburbia, globalization, settlement patterns, even the internet and electronically based information would be gone, or used only minimally, he writes, should fossil fuels deplete with no ready replacement to hand. Large and small-scale resource wars for energy, water, and food would be systemic. It would start with the collapse of the international tourism industry, because that is the first luxury people will abandon. Anything travel-related will be next to decline, including the transportation of food. You get the picture.

Dow 1000

In any event, on a puking day it's better to buy than sell.

–JOHN BUDDEN[153]

Ian Gordon is founder and chairman of Longwave Group, which ties analysis and investment strategies to the Kondratieff Cycle. He believes part of the deflationary cycle will include a plunge by the Dow Jones Industrial Average to 1000. Following are his eight reasons why this will happen:[154]

1. When stock market bubbles burst, prices always fall below the starting price of the bubble. In 1929–32, prices fell 35 percent below the bull market that started in 1921.
2. Size: "When the decline sets in, it must be in proportion to the advance." W. D. Gann (a distinguished analyst who predicted the 1929 crash).
3. The Kondratieff cycle bear market. In 1929–32, the DJIA fell by 89.2 percent; a comparable drop today would take it to 1266 points.
4. Support/Resistance: A base was formed around 1000 between 1966 and 1982, so this is the support level for the current Dow.
5. Values: Earnings and dividends are depressed and indicating a stock market drop from current levels.
6. Elliott Wave Projections: Robert Prechter and Robert McHugh, both prominent Elliott Wave analysts, are, independently of each other,

predicting a cataclysmic bear market. Elliott Wave theory is based on the findings of Ralph Nelson Elliott who posited that market prices moved in specific patterns, or waves, and in accordance with collective investor psychology of pessimism or optimism. Prechter is himself knowledgeable about the Kondratieff Cycle.

7. The Economy: debt elimination will itself force a deflationary depression.
8. Financial markets are cyclical and cannot be controlled.

Gold Confiscation

Governments can also tax gold. The fact is, governments can't get out of debt honestly.

–JOHN BUDDEN[155]

Gold coinage has been debased and the gold price manipulated throughout history, though only totalitarian governments and President Roosevelt actually removed gold from circulation so they could maintain control over the value of their currencies. Some analysts believe this could happen again. And, indeed, some signs that comparable measures may be under way are, in August 2013, surfacing in India where, with a plunging rupee and record current account deficits, the government has restrained lending against gold-backed assets and restricted imports by doubling the duty. Such measures have since been removed but that does not guarantee they will not return. France has banned postal service delivery of precious metals in all its forms, while Fedex has stopped transporting them in Germany and Britain, as well as in France.[156]

Other analysts believe that, since no currency is currently backed by gold, as currencies were until 1971, draconian measures, such as confiscation in order to control the value of currencies, aren't necessary. Manipulating the price of gold is another story. Arguably manipulation is another form of confiscation; this topic is discussed in the appendix on gold.

A Lower Standard of Living

Middle class folks are frightened and too proud to admit that they can't make ends meet.

–JOHN BUDDEN[157]

Despite assurances from politicians and the mainstream media to the contrary, a lower standard of living may be the only worsening case scenario any of us

will endure, but it will be bad enough, and will take many by surprise. It is probably no accident that in the nation where a few vestiges of empire remain, the harbinger of a fate that awaits other Western nations hovers ominously. According to Jeremy Warner of *The Telegraph*, the United Kingdom "stands on the cusp of potentially catastrophic relative decline, with perhaps one last chance, measured only in years, to turn things around. Growth has returned, but it won't be sustained without urgent action to arrest myriad failings in our midst."[158] He then documents how real living standards are no higher than they were a decade ago; how the consumer price index has risen by 30 percent, while the Tulett Prebon Essentials Index – including most of the necessities of living – has risen 60 percent. Meanwhile, standards of numeracy and literacy of school leavers are among the lowest in the developed world.

Elsewhere, the first Kondratieff Winter of the twenty-first century is rife with joblessness, liquidity-fuelled and hence unstable stock-market values, inflation led by higher food and fuel prices, declining or depressed home values, and declining purchasing power. American blogger Charles Hugh Smith drives the point home, writing that any picture that paints boomer retirement as being a bed of roses should be viewed with extreme caution. This picture, he writes, "ignores the changing nature of work and jobs, the unsustainable cost trajectory of Sickcare (a.k.a. healthcare) and the inability of Gen-X and Gen-Y to buy Boomer assets at bubble valuations. Take these factors into minimal consideration and the claim that 76 million people (out of 316 million) can retire with no negative repercussions falls completely apart."[159]

Those on fixed incomes will be particularly affected.

APPENDIX B

Gold

However, the beginning of the rising wave of the third long cycle coincides not only with the aforementioned successes in the natural sciences and production technics but with … changes in the conditions of development of economic life … First, the increase in gold production, beginning in the middle Eighties and especially in the Nineties. Second, the establishment in the Seventies and Nineties, of a gold standard in a number of countries, such as Germany, Sweden, Norway, the Netherlands, Russia, Austro-Hungary, Japan, and the United States.

–NIKOLAI KONDRATIEFF[1]

Brown's Bottom

Nor can private counterparties restrict supplies of gold, another commodity whose derivatives are often traded over-the-counter, where central banks stand ready to lease gold in increasing quantities should the price rise.

–ALAN GREENSPAN[2]

The allure of gold has existed for millennia. Most of this time, it was set at a fixed price and used as money in its own right or to back up fiat currency. Aside from some lingering use as ceremonial coinage, both roles ended in 1971 when the U.S. defaulted on its obligation under the Bretton Woods Agreement to redeem dollar assets for gold. Since then, gold has been regarded mostly as a commodity whose use for jewellery, particularly during India's wedding season, has played a role in its pricing. But gold aficionados never forgot its historic monetary role. During the 1970s, with the dollar floating freely, they knew monetary discipline was gone and that it would open the way to unbridled money printing, credit expansion, and inflationary times.

Thus, unleashed from its $35 an ounce weighting, the gold price soared until Fed chairman Paul Volcker quenched the inflationary fires by raising interest rates in the early '80s. It then declined over a period of twenty years, finally bottoming in 1999, when Britain's then Chancellor of the Exchequer, Gordon Brown, citing gold price volatility and the need to diversify the nation's assets, announced[3] he would commence sale of four hundred tonnes (that is, half) of Britain's gold reserves. While there was nothing unusual in a central bank selling gold, it was unusual to both announce the sale and to do so by auction, which was certain to affect the price of gold negatively. And so the Gold Panic of 1999, which culminated in the now infamous "Brown's Bottom," was set in motion.

In an article dated July 12, 2012, *The Telegraph*'s Thomas Pascoe concluded Brown's Bottom was a deliberate attempt to force the price of gold lower. It was made necessary, Pascoe suggested, by the potential bankruptcy of a large American bank (or two) that were caught short of the "carry trade."

"Carry trade" is the term used to describe the process whereby central banks – or the Bank for International Settlements, which provides services to and acts on behalf of central banks, including gold sales and leasing transactions – swap gold with other central banks or simply lend or lease gold for a nominal charge to an entity such as one of the larger bullion banks. These include Barclays, Goldman Sachs, JP Morgan, Bank of America, UBS AG, Citibank, Deutsche Bank, Scotia Mocatta, and HSBC, some of which have served or continue to serve on the London Bullion Market Association, which provides twice-daily fixings on the gold price. Through one of the gold trading platforms such as the London Bullion Market or the Comex, where there is very little transparency, the bullion bank (using margin, that is borrowed money) might take a short position on gold, then sell the gold it has leased, driving its price down in the process, before investing the proceeds and then repurchasing the gold at the now lower price. Profits are pocketed, and the gold is returned to the central bank. The process works well for both the bullion bank, which makes a profit on the trade while replenishing its own coffers with cheaper gold, and the central bank because a low price for gold makes its currency look good. "This is what had happened on an enormous scale by early 1999," Pascoe wrote.

> One globally significant U.S. bank in particular is understood to have been heavily short on two tonnes of gold, enough to call into question its solvency if redemption occurred at the prevailing price … Faced with

> the prospect of a global collapse in the banking system, the Chancellor took the decision to bail out the banks by dumping Britain's gold, forcing the price down and allowing the banks to buy back gold at a profit, thus meeting their borrowing obligations … [According to] Peter Hambro, chairman of Petroplavosk and a leading figure in the London gold market, "… Mr. Brown found himself in a terrible position, … he was facing a problem that was a world scale problem where a number of financial institutions had become voluntarily short of gold to the extent that it was threatening the stability of the financial system and it was obvious that something had to be done."[4]

Faced with accusations of distorting the market, Europe's central banks hastily convened in order to reassure a public unaware of this alleged backdrop to Brown's Bottom. In late September 1999, they announced the European central bank Gold Agreement or, EcbGA (so written to distinguish it from the ECB[5]), and also known as the Washington Agreement. Fifteen European institutions, including the ECB and the U.K., undertook to maintain gold as an important element of monetary reserves, as well as to restrain their gold sales, leasings, and use of gold futures and options.

The market responded with a 26 percent increase[6] in the price of gold within a matter of days, while the agreement has remained in effect ever since, with its fourth renewal due in 2014.

The Remonetization of Gold

Gold is the next reserve currency.

–ERIC SPROTT[7]

But gold's most recent ascent would only finally commence from the dregs of the dot-com bubble, 9/11, and the arrival of the first Kondratieff Winter of the twenty-first century. Until the 2011 high of almost $1900 that put gold on a course of consolidation between $1900 and $1600, it had not looked back. Then, plunging a further $250 during the April 2013 Gold Smash, it was hit with the steepest decline in the price of gold in thirty years. In all, over a period of some twenty months from September 2011, its price had been trimmed by 27 percent, with further declines still in store.

For gold bears, this signalled the end of the thirteen-year bull market in gold, while gold bulls saw this as a correction reminiscent of the 47 percent decline that took place over twenty months from December 1974 that laid the

groundwork for a breakout in 1976 when gold rose from $103.50 to $850 in January 1980 – a rise of 721 percent. Even the 30 percent 2008 correction that preceded gold's ascent to news highs seemed relevant.[8]

In any case, remonetization of gold remained solidly on the agenda, certainly for proponents of a return to the gold standard and as an investment vehicle for those who believed it to be the only safe haven given so much uncertainty in the global economy. Increasingly, too, it was on the agenda for central banks, among whom Asian, Central European, and Middle Eastern banks were quietly augmenting their gold holdings while others, like Venezuela, were repatriating theirs. Or at least trying to repatriate them. In January 2013, Germany, owning some 3,400 tonnes of gold, requested the repatriation of some of its reserves held in New York and Paris, prompting speculation that the world's second-largest holder of gold reserves feared confiscation should the U.S. face a debt crisis of its own. The U.S., however, agreed, but only on an extended timetable for full delivery. Auditing its gold reserves was, in any case, not a bad idea for Germany, given some support for the implementation of the European Redemption Pact – a two trillion Eurobond that would be backed with gold pledges commensurate with the debt in excess of 60 percent of GDP (the amount allowed under the Maastricht Treaty) for which each eurozone member, including, by now, Germany, needed financing.[9] Full implementation of this pact, after all, would be a significant move towards an institutional role for gold and its status as money.

Other signals, too, suggested a return to a monetary role for gold, the most notable of which was consideration by the Bank for International Settlements and the Federal Deposit Insurance Corporation to admit gold as a "zero percent risk-weighted item" in the quest to improve banking solvency and liquidity.[10] Similarly, the Official Monetary and Financial Institutions Forum, a global think tank created during the financial crisis, concluded that the international monetary system was on the brink of change and that there should be a role for gold particularly in its capacity to be an anchor for currencies.[11]

That such proposals were being taken seriously would certainly explain the vast accumulation of gold under way by the world's central banks, suggesting skyrocketing gold prices should those proposals become official.

But beyond the arcane worlds of monetary reform and high finance, citizens, too, were mobilizing behind gold. In Switzerland, over a hundred thousand petitioners, the mandatory minimum required for a national referendum, have called for the repatriation of Swiss gold, a veto on the sale of any gold reserves, and a gold-to-reserves ratio in the Swiss central bank of

20 percent within five years.[12] A similar move in Texas to repatriate its gold reserves from New York as well as the remonetization of silver in Mexico and the approval of gold and silver as legal tender by Utah, with Arizona following its lead, confirmed the trend now thoroughly entrenched in Turkey where, since September 2011, commercial banks had been allowed to meet up to 10 percent of their reserve requirements with gold bullion. Then there was the fact that, in 2010, the former World Bank head Robert Zoellick and Chinese dignitaries had already called for the return of gold to some capacity in a new reserve currency and the world monetary system, as had Thomas Hoenig, president of the Federal Reserve Bank of Kansas City; Robert Mundell, Nobellist and "Father of the Euro"; and Steve Forbes, publisher.

The Answer to Currency Weakness

In the absence of the gold standard, there is no way to protect savings from confiscation through inflation. There is no safe store of value.

–ALAN GREENSPAN[13]

Millions of unsophisticated investors are also answering gold's call, understanding intuitively what the aficionados have known all along, namely that kings, emperors, and even democratically elected politicians will too often ignore the lessons of fiscal and monetary responsibility. Overreaching their budgets, they eventually resort to debasing their currencies to help cover the shortfall. Sometimes it works, but frequently their ill-conceived plans for inflating away their debts, or encouraging exports, or trying to expand the money supply, result in catastrophe. Indeed, some thirty hyperinflations have taken place globally since 1914 when nations left the classical gold standard in order to avoid its restrictions on printing the money needed to fight the Great War. Once hyperinflation or equally devastating times arrive, all instruments of financial exchange become untenable save for gold, the one universally accepted medium of exchange.

In such times, but particularly in depressionary times when governments are most likely to devalue the currency, the price of gold rises. Hence, Nikolai Kondratieff could observe that gold production increases in the Winter/trough of the long wave, as indeed it has since 2000 and into 2011, when all-time records for gold production were reached and gold prices pushed to a high of over $1,900 an ounce.[14] High gold prices means miners have more money for the expensive process of extracting the precious metal, though, by 2013, some gold experts were referencing "peak gold" theories. With mine

supply at roughly 2,700 tons a year, John Embry of Sprott Asset Management argued not only that supply was diminishing from regions of the world that are politically and economically safe but also that rising costs and environmental issues have made it expensive to open new gold mines anywhere. Additionally, mines that dramatically benefited from the new technologies of the 1980s are now reaching the end of their productive lives, while junior miners, now that gold prices have declined from the 2011 highs, are squeezed for cash. All this portends a classic supply shortage, Embry concluded, even as demand explodes due to the vulnerability of fiat currencies.[15] As in the '80s mining sector and today's energy sector, technological innovations are sorely needed for mining gold which is harder to access.

The April 2013 Gold Smash

Big computers, miles of derivatives and sci-fi algorithms have resulted in an unprecedented level of (gold) price suppression.

–JOHN EMBRY[16]

Following the August 2011 highs of over $1,900 an ounce, gold prices were, in the words of Embry, "driven relentlessly lower,"[17] culminating in a rout, in mid-April 2013, that reduced them to $1,335 an ounce and by June to under $1,200 an ounce. As London bullion broker Ross Norman described it, it was the classic "short squeeze." The CEO of London-based Sharps Pixley wrote, "The monumental short selling on COMEX on Friday and Monday had the desired effect – it took out key technical levels and precipitated a cascade of further selling as traders who were long the June contract capitulated. The selling begat more selling and the rest is history. A classic short squeeze executed to perfection."[18] The action was, he concluded, the result of a few hedge funds that had made smaller successful attempts a few months earlier and that, with little response from the gold market to the crisis in Cyprus, Japanese QE, and North Korea, plus reduced margin requirements from the CME, which meant very little money was needed to effect their trade – it was just a matter of timing. "The selling on COMEX was large and fast – a really spectacular display of shock and awe."[19]

The question of whether or not gold prices are manipulated created a vortex of controversy in the gold community, one made worse by the absence of transparency in the bullion exchanges and in futures electronic trading platforms such as the New York Mercantile Exchange's COMEX, where the April 2013 Smash took place. To be sure, interventions such as those implemented

by the London Gold Pool, starting in 1961, were an attempt to keep the price of gold at $35 per ounce – the price agreed at Bretton Woods in 1944 – which eight nations decided to defend with targeted selling and buying on the world markets where it traded as a precious metal commodity. But these attempts to "manipulate" the price of gold were open and clearly understood. And when runs on gold, the British pound, and the U.S. dollar rendered the exercise untenable, the Pool was dismantled as first France, then others, claimed their gold reserves from the U.S. and withdrew from the Pool. By 1968, it was gone. Of course, such transparency proved the exception, not the rule.

Throughout history, when gold formed the currency or backed the currency, open or even covert intervention was one seamless operation. For instance, King Henry VIII was nicknamed "Old Coppernose" because of the eight times he devalued by adding copper to gold coinage. The Romans, before him, added lead. During the time of the gold standard, governments, including the totalitarian governments of Stalin and Hitler and the democratic government of Franklin Delano Roosevelt, have resorted to withdrawing gold from circulation. While Roosevelt's subsequent setting of the gold price to devalue the dollar restored some growth to the U.S. economy, at least temporarily, Nixon's closing the gold window, on advice from Milton Friedman[20] in 1971, resulted in stagflation and, by the late 1970s, borderline hyperinflation. In 1985, Reagan also devalued, but this time without triggering a rise in the price of gold. The Plaza Accord was a planned, "orderly" devaluation designed to address the dollar's strength against the yen and the deutschmark. This successfully reduced the U.S. trade deficit with Germany but, in clear evidence of why all such manoeuvres have adverse effects, it failed to do so with Japan. When the Accord was rescinded a few years later, it was too late for Japan, where the strengthened yen led to declines in exports and a subsequent recession. Attempting to overcome this, the Japanese used expansionary monetary policies that led to the asset bubble of the late 1980s[21] and, ultimately, to its tragic Lost Decades.

Today, while gold has ostensibly been left to its own devices, currency devaluation is a function or by-product of central bank bond buying and lower interest rates. Governments, however, maintain a huge interest in the price of gold, not least because many, particularly Asian, Arab, and Russian governments, are augmenting their own reserves, which, like the rest of us, they hope to buy at a low price. High gold prices, in any case, signal disaffection with policies made by governments whose ultimate aim is to promote investment in equities and bond purchases while maintaining control over

the value of the nation's currency which, if low enough, helps export sales. Thus, for buying, for face-saving, and for "economic" purposes, "relentlessly" driving down the price of gold is very much in governments' interests. At least for the time being.

For this reason, and like Gordon Brown's announcement of the U.K. gold sale in 1999, just the mention by ECB head, Mario Draghi, that Cyprus, and therefore other EU countries, might sell their gold to pay down debt and thus lower its price was enough to spook gold investors prior to the general sell-off of April 2013, even though EU countries are restricted, under the Washington Agreement, in the amount they can sell, even if they did want to sell. And like the Brown's Bottom sale, four hundred tonnes of gold were released into the market on April 12, 2013. This time, however, an auction was not necessary. High frequency, algorithmic trading ignited by the massive release of "paper gold" – so-called because it consists of futures contracts and exchange-traded funds not necessarily backed by physical gold – into the markets could produce the same, price-killing effect much more effectively as margin calls, stop loss orders, and other electronic trading mechanisms then kick in. The result was, just as Ross Norman describes above, a shock and awe waterfall sale of gold and a $200 decline in its price over the course of two days enabling some institutions to scoop it up at fire sale prices. Even the stage for this extravaganza was set in ways comparable with Brown's Bottom, though, these days, when media messaging is so tightly managed, central bankers or even Chancellors don't have to step forward when so many are willing to do their work for them. In this case, the world's biggest bullion banks,[22] like Credit Suisse and Société Générale, called for the "end of the gold bull era," while Goldman Sachs, just days prior to the Smash, put out a sell signal on gold even as the "large traders," generally understood to be the bullion banks or large hedge funds in the lingo of officialdom's key weekly COT report,[23] had amassed short positions in precious metals as early as January.

By itself, profiteering of this nature might cause a well-deserved sense of outrage from the gold investment community, but more worrying, as Larry Jeddeloh reported on April 15, was how some 2 million ounces of bullion worth $2 billion had been withdrawn from the COMEX warehouse of the New York Mercantile Exchange just about the same time Cypriot bank deposits had been partially confiscated and word went out that the country might have to sell its $550 million worth of gold. News of the bullion withdrawal caused a $70 drop in the price of gold. Following pronouncements from Société Générale and Goldman Sachs, Federal Reserve minutes were leaked to these

same bullion banks suggesting QE may end or be tapered off. On Friday, April 12, Putin's plane arrived in Geneva. That night, the Smash began.

With four hundred tonnes of gold worth $20 billion thus dumped into the system, Jeddeloh concluded that an event in Europe, which might result in a general asset liquidation in order to prevent a run on government bond yields, was imminent. About the Smash itself, he would conclude that "someone was in a hurry to sell because either their liquidating sale was forced or they in fact wanted the price lower so they could cover a position at lower levels or make deliveries, after the market shook loose supply."[24] He added that if the amount of deliverable gold was, in fact, in short supply, the price of gold must either rise in order to buy more, or it must be forced down to cause supply to hit the market.

Allegations of price rigging, led by London metals trader and arch whistle blower Andrew Maguire, rounded out Jeddeloh's hypothesis. On April 12, *King World News* listeners were informed of the potential for default by the London Bullion Market where, according to Maguire, "There is absolutely no physical gold for sale."[25] Following hard on the Libor scandal in the banking sector, such misgivings about gold trading had already prompted investigations by the Commodity Futures Trading Commission, but a bigger question remained. Was the 2013 April Smash, like 1999's alleged events around the Brown Bottom, the result of manipulations to cover yet another failing "too big to fail" bank, this time with over-leveraged physical gold – perhaps by as much as 100 to 1 – that it could not possibly deliver?[26] Worse, selling a hundred times more bullion than the actual amount in possession is an unsavoury practice known as naked short selling, which is not illegal, but not kosher either.

Any number and manner of interpretations may exist about the exact circumstances behind the April Gold Smash, but perhaps the key is contained in the recommendations of international institutions such as the BIS and the OMFIF. A remonetized role for gold – which would, effectively, allow the "too big to fail" banks to become "recapitalized" at no further expense to taxpayers – means they need access to inexpensive and large stores of gold, by whatever means they can obtain it, in order to position and hence benefit from a huge rise in its price. This, the reader will remember, is the strategy employed by Roosevelt in 1933 when he confiscated gold then raised its price with windfall profits accruing to all the institutions in possession of gold, particularly the Treasury.

Compatible with this hypothesis is a theory by James Rickards, who suggests the Smash may have been orchestrated by China itself, in order to help it acquire gold reserves sufficient to allow it to be a player in any new gold-backed international monetary system.[27] For this they need a ratio of gold to GDP that puts them on a par with the U.S., Russia, and the EU. We can expect, therefore, a lid on prices until China catches up, he says. As the world's largest miner, importer, and acquirer of gold, it could put in place the necessary 4,000 tonnes by 2014, he adds.

Towards a new Gold Standard

The significance of the gold standard is not to be seen in its ability to stabilize prices, which is neither possible nor desirable. It is, rather, seen in its ability to stabilize the rate of interest at the lowest level that is still compatible with the requirements of the saver. The stabilization of the rate of interest and foreign exchange will then impart as much stability to the price level as is consonant with a dynamic economy.

–ANTAL E. FEKETE[28]

Proponents of a return to a gold standard view machinations like the April Gold Smash with alarm. In the U.S., the movement for a return to a gold standard is informed by the teachings of economist, historian, and political theorist Murray Rothbard, whose Austrian School convictions helped define modern-day Libertarianism, while the most current public face of the movement is lawyer, economist, investment banker, and author James G. Rickards (widely quoted in this book).

Rothbard's latter-day acolytes include one-time Republican presidential candidate Ron Paul, and one-time New York gubernatorial candidate Lewis Lehrman, both of whom served on the U.S. Gold Commission, established by Congress in 1982 to evaluate the role of gold in the monetary system. With Milton Friedman's monetarism in vogue, and his wife, Anna Schwartz, as executive director of the Commission, gold did not have a chance. But Lehrman and Paul produced their landmark minority report *The Case for Gold* anyway, some highlights from which are included in chapter five above on the 'flationary crises. Rothbard cites the stability of prices through the better part of the nineteenth century, that is, during the reign of the British Empire, brought about by the classical gold standard. No fan of long-wave theory, much like other economists who believe that, with the right set of bells and whistles (or, in the case of the libertarians, fewer bells and whistles), they can

fix what ails the economy, Rothbard argued that the gold standard smoothes out most cycles and is the key to continuing prosperity.

As Antal Fekete – the professor emeritus of Memorial University who combines Austrian economics and long-wave theory – would point out, though prices are the same at the beginning and end of the gold standard, K-wave price fluctuations take place between. Moreover, as a Bank of England paper published in 2011 demonstrated, the incidence of bank and currency crises were dramatically lower under the classical gold standard (1870–1913), with the average number of external defaults per year half those under the fiat system.[29]

Whatever the merits of the gold standard, it is but one monetary policy tool, and while monetary policy may be the most important determinant of the financial markets, it is only one determinant of productive capacity and wealth creation in the real economy where ebbs and flows are a function of the many measures Nikolai Kondratieff started to identify in the 1920s. Of course he would be the first to remind us the upswing isn't possible without a strong base of savings upon which capital investment can then take place. And since savings aren't possible without an attractive interest rate, it does seem to come back to central bank policy, though this isn't incompatible with the fundamental restructuring of the economy that is also necessary. So far, certainly, it is clear there is no magic fix or one-size-fits-all approach to smoothing out the Kondratieff long wave, however much central bankers or policy-makers may try, and even if it were desirable. After all, we live in a time when productivity gains markedly affect prices and when even bubbles and deflation have their uses in shaking out new innovations and clearing the system of worn-out factors of production particularly in such areas as capital goods and production inefficiencies. The only question is, can we ride the wave well, or must we ride it badly? In this light, the classical gold standard clearly has a role to play. Inordinacy, the failure to exercise restraint, particularly in the accumulation of debt, whether personal or public, is an abiding human trait that is economically lethal when plied by politicians and voters only too happy to partake of their largesse. Do they need restraining? Absolutely. The reinstatement of the gold standard would clearly help towards this goal.

It is important to remember that the gold standard has many detractors, particularly those who blame it for the Deflationary Great Depression. (Proponents argue the answer is to price gold properly in the first place.) Additionally, most of the major Western governments want no constraints

placed on their ability to manage their own currencies, particularly their ability to print (devalue) at will.

This issue is at the heart of the European crisis foreseen when countries like Greece may default and depart the monetary union in order to restore currencies to their own control. It is also endemic to powerful nations like the U.S. who will rebuff any perceived attack on its privileged status as holder of the globe's reserve currency. To what lengths will the U.S. government go to achieve these ends? Once again, events around the April 2013 Gold Smash are instructive. According to former Reagan economic advisor and *Wall Street Journal* columnist Dr. Paul Craig Roberts, it was orchestrated as part of its "dollar protection policy."

> So what they are trying to do is scare the individual investor out of bullion. Clearly there is something desperate going on … I have assumed from the beginning that it is the Fed's concern with the dollar because the dollar is being printed in huge quantities at the same time that other countries are abandoning the use of the dollar as international payment.
>
> The exchange value of the dollar is (being) threatened, and if that collapses the Fed loses control over interest rates. Then the bond market blows up, the stock market blows up, and the banks that are too big to fail, fail. So it's an act of desperation because they've got to establish in people's minds that the dollar is the only safe place, it is the only safe haven, not gold, not silver, and not other currencies … So I see this as a dollar protection policy.[30]

The economist and gold scholar Antal Fekete saw the April 2013 Gold Smash in a similarly stark light. The paper gold market (ETFs and futures) were demoralized by a "ferocious attack on the high price of gold," he wrote on his website on April 18. The Fed was trying to stop the process of backwardation that was, by now, resulting in diminishing supplies of gold as increasing numbers of individuals and institutions took possession of their physical holdings even as bullion banks had leased increasing amounts of gold under a "fractional" gold system that meant those amounts might never have existed in the first place or, if they did exist, might never be returned.

Certain that the $200 drop in the gold price between April 12 and 15 was the result of the Fed selling vast quantities of paper contracts, Fekete argued that the bullion banks would never have to deliver on the contracts since delivery of gold could be suspended under the *force majeure* clause. Certainly they would be compensated by the Fed for the losses they were sure to incur

(even as banks like Goldman Sachs cleaned up on the short positions they had taken following their announcement on April 10 that the gold price would decline precipitously). Meanwhile, ordinary investors would be "shaken" out of their holdings, making their gold available to rescue the strapped futures markets.

The plan would, however, backfire, wrote Fekete. Lower gold prices increases the demand for the precious metal, making backwardation worse not better. "Permanent backwardation of gold and its concomitant, the re-invention of barter – the ultimate in deflation – will be the result. There is no reason to fear that the Fed is pushing the world into hyper-inflation," he concludes. "In fighting the gold price, the Fed unwittingly pushes the world into hyper-deflation. All the same, it is destroying the dollar and the international monetary and payments system."[31]

At time of writing, in May 2013, the jury is out on why the Gold Smash took place. More than a perverse act in profiteering it is clear even to me, a novice gold investor, that it was an extraordinary event including the possibility it was an attempt to address a potentially serious issue having to do with a vulnerable bank, or to do with diminishing gold supply generally, or as a de facto manoeuvre to recapitalize the world's "too big to fail" banks or as an attempt to augment Chinese gold holdings. But, as the removal of two million ounces of gold from the COMEX warehouse suggested, owners of physical gold were now demanding outright possession. Subsequent reports of defaults on delivery of physical gold by some major institutions, including ABN AMRO, the largest Dutch bank in the eurozone, confirmed the suspicion that gold contract customers were no longer able to take physical delivery of the gold they had purchased. Even the Chicago Mercantile Exchange had to inform a former CEO that it could not deliver on his two gold contracts.[32] As for ETFs, they were undergoing mass liquidation. By the end of April, outflows of physical gold from the SPDR Gold Shares ETF reached 4.5 million ounces, the biggest outflow in forty-three months.[33] As Fekete surmised, a run on gold was one unintended consequence of the Gold Smash. Fortuitously, perhaps, the first sector to rebound following the Smash was equity shares in gold mining companies – the front line for increasing supply.

If investors were reeling from the assault on their gold portfolios, at least the debate had been joined. When author, and founder of the Interest Rate Observer James Grant is invited to address the Federal Reserve Board on the benefits of the gold standard,[34] or Nouriel Roubini and Ben Bernanke speak out against it, it is clear the issue is on some very important radar screens. Indeed,

Ambrose Evans-Pritchard, noting how central banks had purchased more bullion in 2012 than at any time during the previous half century, and how neither the euro nor the dollar can inspire confidence, has called for gold to be designated the "third reserve currency – one that cannot be devalued, and one that holds the others to account, but not so dominant that it hitches our collective destinies to the inflationary ups (yes, gold was highly inflationary after the Conquista), and deflationary downs of global mine supply. That would indeed be a return to a barbarous relic."[35] Simon Johnson, the former IMF economist and co-author of *13 Bankers*, now recanting his position against a gold standard, has also called for its return.[36] For whatever reason, some interested party – indeed probably many interested parties – wanted the price of gold lowered, and they succeeded in getting it.

Until the monetary issues of our time are settled, volatility in the gold market will continue, whether through manipulation, normal market gyrations, or concern about the status of the world's currencies. The question, then, for the average investor becomes – can you beat city hall? If the powers that be are beating down the price of gold, what chance have we got to gain from gold? The answer is that, by ourselves, we don't have much of a chance, though the number of people buying silver and gold coins and jewellery suggests more than bargain hunting is under way. Notably, Asians lined up in droves to buy the precious metal. And, when the Russians, Chinese, and Indians, along with innumerable smaller nations, also buy gold, the equation shifts decidedly in our favour.

It also shifts in our favour when, as discussed above, it becomes apparent that the supply of gold – that is, both the amount that is being produced and the amount that is in circulation – is being reduced. While the central banks of countries like Canada have long since sold all their gold, others, in trying to manipulate the price of gold, may also have run down their own supplies by leasing or selling it. This must result in higher prices for gold.[37] (See also A New Dark Ages in appendix B re gold backwardation.)

The Seasons for Gold

Small mining companies are like lobster pots – very easy to get into but much harder to get out of.

–JULIAN BARING[38]

While gold was the top-performing asset class since the year 2000, the fact is, for the twenty years previous, it was not. And for those of us who entered the

gold market at the 2008 or 2009 lows and enjoyed gold's ascent from $800 an ounce to $1,900 an ounce, only to see much of it evaporate as mining companies commenced K-Winter corporate restructuring that saw many share prices return to their 2008 lows, the experience has been very painful. Early bullion investors, or those who took their profits at the 2011 highs, may have withstood gold price declines and volatility, but the rest of us have fallen victim to a failure to appreciate how mining shares amplify bullion prices until it was too late or by becoming cannon fodder in the paper gold wars.

And, like other asset classes, gold has its ups and downs for technical, fundamental, and seasonal reasons, though of all the asset classes, it is fair to say it is more dependent on macroeconomic issues than others. In this respect, Ian Gordon of Longwave Group picks gold for investment purposes in the Kondratieff Summer, as well as Winter. But concerted movement towards the re-establishment of an international gold standard could shift even that equation in a major way. If a gold standard should be adopted, or gold be used in some capacity in a new reserve currency, or as currency, it is possible the price would rise, be pegged, and stabilize or, alternatively, be traded as a currency along with others. When this moment arrives, it will be a clear signal that the Kondratieff Spring is upon us.

In their book *The Sovereign Individual*, Davidson and Rees-Mogg posit ideas about just such eventualities and look to gold-based cyber money for the purpose. Here's the key paragraph:

> While paper money will no doubt remain in circulation as a residual medium of exchange for the poor and the computer-illiterate, money for high-value transactions will be privatized. Cybermoney will no longer be denominated only in national units like the paper money of the industrial period. It probably will be defined in terms of grams or ounces of gold, as finely divisible as gold itself. Or it may be defined in terms of other real stores of value. Even where different pricing measures are used, or certain transactions continue to be denominated in national currencies, cyber money will serve the consumers far better than nationalized money ever did. Rapidly advancing computational capacity will diminish the difficulties of adjusting prices to various media of exchange to the vanishing point. Each transaction will involve the transfer of encrypted multihundred-digit prime-number sequences. Unlike the paper-money receipts issued by governments during the gold-standard era, which could be duplicated at will, the new digital gold standard or its barter equivalents

> will be almost impossible to counterfeit for the fundamental mathematical reason that it is all but impossible to unravel the product of multihundred-digit prime numbers. All receipts will be verifiably unique.[39]

The subsequent paragraph explains how the above addresses dangers lurking in the system today for owners of gold ETFs, certificates, and other gold holdings in paper:

> Paper money in the West began as a warehouse of safe-deposit receipts for quantities of precious metals. Governments issuing these receipts soon found that they could print far more of them than they could actually redeem from their supply of bullion. This was easy. No individual holding gold or silver certificate could distinguish any information about the actual supply of precious metals from his receipt. Other than the serial numbers, all receipts looked alike, a fact that appealed to counterfeiters as well as politicians and bankers seeking to profit from inflating the supply of money.[40]

Concluding that this new cyber money will free us from the power of the nation state, the authors add:

> Cybermoney will be all but impossible to counterfeit … officially or unofficially. The verifiability of the digital receipts rules out this classic expedient for expropriating wealth through inflation. The new digital money of the Information age will return control over the medium of exchange to the owners of wealth, who wish to preserve it, rather than to nation-states that wish to spirit it away.[41]

If all that seems somewhat apocalyptic, consider how, by 2010, 16 percent of American commerce took place in the form of e-commerce.[42] While few think of PayPal or online credit cards as a form of cyber money, a step in this direction was all but inevitable as the arrival of "bitcoin" in 2009 proved. Backed neither by gold nor government mandate, bitcoin is cyber currency traded somewhat like gold as part currency, part commodity. As a stateless but fledgling currency, however, it has fallen victim to hitches and glitches, not least being prey to use for criminal purposes and susceptible to bubbles as evidenced by its spectacular crash in 2013. It would seem that any would-be stateless currency might benefit from being gold-backed, particularly should gold itself be part of any new reserve currency arrangements. In the meantime, we may survive apocalyptic times by holding, at a minimum, what even

conservative portfolio managers recommend, a small amount of gold as a form of portfolio insurance with the caution that price fluctuations will be volatile and that gold should, for wealth preservation purposes, be held only for the long haul. True believers like Jim Sinclair advise the use of gold for saving and fiat currency for day-to-day transactions.

Superior analysis and regular reports on gold are available from Canada's Sprott Asset Management and from Ronald-Peter Stöferle of Incrementum Ag in Liechtenstein.

The Stöferle Touch

In gold we trust.

–RONALD-PETER STÖFERLE

The following draws substantially from Ronald-Peter Stöferle's 2011 *In Gold We Trust*,[43] produced while he was with Erste Group, with additional material where indicated.

Gold's Character

The monetary character of gold is underpinned by its 4,322 percent gains since 1970, and its being held by global central banks as a key reserve. This return to a track record of millennia of monetary status indicates that the bull market and its acceptance have entered a new phase.

Gold offers no interest, but neither has it any counterparty risk; it is pure ownership without liabilities and is increasingly accepted as collateral in a variety of international transactions.

Gold production and reserves grow at about the same pace as the global population, ensuring stability and trust. Among the criteria for an optimal currency, gold supplies liquidity, indestructibility, a high ratio of value per weight and volume unit, negotiability, easy divisibility, global acceptance, etc. Fiat currency, on the other hand, is credit money that involves no obligation of the issuer to exchange it for currency money. The term is derived from the Latin *fiat*, "let there be." Fiat money turns into money when the governing bodies of a state declare it such. Today's central bank money such as the euro or U.S. dollar is fiat money. Gold has a track record of six thousand years as the currency of last resort and has never turned worthless.

Central Banks and Gold

The ECB, the Federal Reserve, and the Bank of England have expanded their balance sheets (by many trillions of dollars) since 2007. Trust of U.S. citizens

in their banks and Congress has fallen precipitously since 1979. The Fed cannot influence where newly created money is going. But if its goal was a sharp increase in share prices, low volatility, and excessive speculation in agricultural commodities, energy, and precious metals, it has been successful.

Since 1917, the U.S. debt ceiling has been raised ninety-three times. Since 1962, it has been raised seventy-four times, and since 2001, ten times already. There are only a few ways out of the debt trap and gold benefits in all of them: growing out of debt as the U.S. did after WWII; drastic spending cuts and rigid budget consolidation; massive tax hikes; printing money; creating inflation; depreciating the currency as in 1934; financial repression in conjunction with negative real interest rates; and national bankruptcy.

Inflation has never been the primary driver of gold on its own. Negative real interest rates, which existed in 54 percent of months in the 1970s and, since 2000, in 47 percent of the months, provides the optimal environment for gold. When real interest rates rise above .99 percent, gold weakens significantly. Negative real interest rates reduce interest expense by default and eat into the existing debt, thus transferring money from savers to debtors, including governments in debt. This form of financial repression is in vogue among the majority of nations these days.

While government debt can help increase GDP, after a certain point the returns per unit of debt decrease, then fall precipitously. This explains why stimulus programs have only limited effect.

The Gold Standard

The central feature of a gold standard is the fact that gold is used as a measuring unit whereas a system that measures gold in paper currencies cannot be. In a gold standard, the paper currencies oscillate around gold and are measured in terms of gold. The period 1870 to 1914 recorded the highest real growth rates worldwide and was among the most peaceful in history, which is why Ludwig von Mises could observe that "the gold currency liberates the creation of purchase power from the influence of politics and from the fluctuating economic philosophies held dear by changing the political majorities. This is its advantage."[44]

During the Great Depression, the majority of nations dropped the gold standard only to see a latent, strong demand for gold emerge as well as a drastic appreciation in its price. This rarely discussed period represented the first big gold bull market of the past century.

The value of gold (and silver) for monetary purposes is not its scarcity, but

the fact that the full stock of gold ever mined, about 170,000 tonnes, is still in existence, while production in 2010 was 2,586 tonnes. Global gold reserves grow at about a rate of 1.5 percent a year, more slowly than all other money supply aggregates. This creates safety and trust that it will maintain purchasing power as the stock of gold, unlike other commodities, cannot be consumed (and, unlike paper currencies, cannot be inflated – author's addition).

Throughout history each attempt at stimulus has drawn a lower rate of return; societies respond to crises by increasing complexity until they collapse under their own weight. Charting reserve currencies since 1450, these have changed approximately every one hundred years, so the jig is up for the U.S. dollar. (See also chapter six, War: The Ultimate Economic Crisis.)

Gold Price Targets

Two prevailing criteria apply. The first criterion is that, as a safe haven for investors, much as in the 1970s, the price of gold will match the USD inflation-adjusted high that it reached in 1980. That price, in summer of 2013, is $2,300.

The second criterion is the Shadow Gold Price, the price of gold that applies with implementation of a gold standard. To determine this price, the formula used at Bretton Woods divided the U.S. monetary base by U.S. official gold holdings. Back then, this calculation produced an exchange value for gold of $35 per ounce of gold. In 2011, based on the same formula, the Shadow Gold Price would be just under $10,000, that is, "the theoretical price of gold … were the Fed to depreciate the USD to a level that would cover systemic bank liabilities (transfer a debt based into an asset backed currency)."[45] If the money supply fell by 25 percent, then the shadow gold price would still be $7,456. If it rose by 50 percent, it would be $16,634. Other money supply aggregates such as debt-to-gold supply metrics place the gold price much higher.

The Federal Reserve Act of 1914 stipulated at least a 40 percent gold coverage of the monetary base; if the same rule applied today, the final gold price would be 40 percent of the shadow gold price. Bear in mind that, in order to cover 40 percent of its M1 money supply, China would need 35,000 tonnes of gold. According to official records, in 2011, China held 1,054 tonnes, with key advisors recommending the purchase of as much as 8,000 tonnes. Chinese citizens, too, are actively encouraged to own gold. In addition, China is preparing for the post-USD by making the yuan fully convertible; but, in the short term, is aiming to settle 50 percent of its foreign trade in yuan by 2016. In the meantime, it is increasing its money supply. "If China wanted to cover 40% of its M1 money supply with gold, it would have to buy more than 35,000

tonnes of gold, Stöferle wrote. "If the USA appreciated its gold reserves to USD 6000/ounce, it would cover 40% of M1 without a problem. At USD 6000/ounce, China would still have to buy 9,000 tonnes in order to be able to cover 40% of its own money supply."[46]

Demand

Demand for gold as an investment continues apace, as does the demand for jewellery whose main drivers are the middle classes in China and India. Gold forms part of the dowry for brides in India, where its monetary character gives the bride protection if the marriage fails.

The next round of investment demand will be driven by institutional investors, insurance companies, and pension funds. Pension funds alone manage $30 trillion worth of assets. In 2012, a Japanese pension fund bought gold, as did the foundation of the University of Texas, in 2011. In the meantime, the world's hedge-fund icons John Paulson, David Einhorn, and Paul Tudor Jones all have holdings in gold. Billion-dollar bond-dealer Bill Gross of PIMCO, and the world's largest hedge-fund manager, Ray Dalio, have also recommended gold holdings.

Asian and Arab central banks are net buyers of gold.

Supply

Since 2000, the gold price increased by over 450 percent, but annual production exceeded only 2,000 (2,620) tonnage in 2010 (2,672). In that time, production in emerging countries has risen from 19 percent of global production to 36 percent. China is the world's largest gold producer, and Russia is the fourth largest, yet both import large amounts, suggesting they are hoarding their own gold production. Since many of the ninety countries producing gold have unstable regimes or poor infrastructure, the top ten mining jurisdictions for investment purposes are in Canada, Australia, and Mexico. Higher gold prices, however, have made even difficult mining operations profitable.

Gold Mining Shares

Since the beginning of the gold bull market in 2000, major producers such as Barrick Gold and Newmont Mining have underperformed the price of gold. This is because of drastic increases in input costs, failure to grow through conventional exploration, and derogation to expensive acquisitions, which are often financed by diluting shareholder capital. This has made junior and mid cap gold mining shares marginally more attractive, but still risky. Takeover volume reached an all-time high in 2010. Additionally, gold mining shares

have had to compete with ETFs, which have no operational risks. Some cash-rich companies are offering shareholders dividends as an inducement to invest; others, like Barrick Gold, in 2012, are reorganizing at the management level.

Mining companies have endured their own Kondratieff Winter with all the adjustments it imposes. As the Australian chartist Nick Laird explains, "KWave Winters destroy fiat values vs. physical gold for all stocks – gold stocks included, as per the Dow Gold ratio."[47] Only when the Dow bottoms will gold stocks surge once again, he says, just as they did after the Dow bottomed in 1932. How will we know when we've seen the low? "The ratio between the Dow Jones index and the gold price still has further to fall. It hasn't bottomed yet. It will go back below 2, probably to 1 … In other words, you will be able to buy the Dow with one or two ounces of gold. If the Dow is 10,000, then gold is $10,000. If the Dow is 1,000, gold is $1,000. This also happens to be one of my long-term targets for gold."[48]

Technical Analysis of the Gold Price

Seasonal factors affecting the price movement of gold are the wedding seasons in India, which take place in autumn and spring. For this reason, jewellery makers tend to stock up in the third and fourth quarters, which also covers their needs for the Christmas season. Historically, the price of gold has risen in September 65 percent of the time.

Silver: The Next New Economy?

In recent history, silver's widest application was in photography where, given the technological transformation to which photography has been subjected, the ride for silver hasn't been easy. In their heyday, companies like Polaroid, Kodak, and Fuji were the de facto refiners of silver. According to Miguel Perez-Santalla, Vice President of Business Development at BullionVault, demand by this industry peaked in 1999. The rise in the use of digital cameras meant a decline of 70 percent in the demand for silver. Production in photovoltaics, a process in which silver is used to convert light into electricity, reversed this trend when Western nations started subsidizing their solar industries. By 2010 and 2011, demand for silver had exploded, along with its price, which meant increased production costs for the photovoltaic industry. Combined with its need for the highest grade 999.9 fine silver, which could not be met by the silver industry, this created the worst possible world for both industries. The silver futures market rapidly went into backwardation. But even at peak supply, demand by the photovoltaics industry only barely filled the void left by the photography industry. That, writes Perez-Santalla, combined with

decreasing subsidies for photovoltaics, was the main contributor to the decline of silver's price since 2011.[49]

Even so, Eric Sprott believes silver will be the investment of the next decade. In a world in which, by 2030, the planet's projected nine billion people will need 30 percent more water, 40 percent more energy, and 50 percent more food, he may well be right. According to a Wharton School study,[50] new technologies and approaches to everything from bio-fuels to desalination will be needed. Author and money manager Stephen Leeb says that, with a projected demand for 700 gigs of photovoltaics into 2020, the amount of silver needed will consume 50 percent of silver mine supply.[51] Silver is also needed for producing solar energy in a process whereby electricity is produced by water heated with light reflected from mirrors. And, as Michael Berry, an economist who specializes in discovery investments, explains, desalination, in particular, is energy intensive. Energy is also very expensive and generally unavailable in the emerging world where the highest demand for potable water will be felt. Sunlight, however, when combined with graphene and silver nano particles, which is highly light absorptive, is able to purify water cheaply.[52] And where today's uses of silver extend from cell phones, PCs, and laptops to automobiles, button batteries, medical, and thick film photovoltaics, new industrial uses will include supercapacitors, superconductors, and water purification. It can also block Wi-Fi signals, which means it has applications in addressing national cyber security issues, as well as individual privacy issues. Its market drivers will vary from those of gold, but it often follows gold prices as its "poor man" version for monetary purposes. Now in varying stages of diffusion, the oil, auto, and information technology eras are the Old Economies. Could the next New Economy be the era of silver and light?

Risks

Regulatory: Under a rule disallowing allocation in commodities beyond 2.7 percent, a Dutch central bank forced a pension fund to sell most of its gold holdings. Constraints also exist on institutional investors in Germany. In addition to the imposition of regulatory controls, some of the world's major central bankers and economists have openly opposed a return to a gold standard. They will be the main determinants of the next monetary system and are, in any case, unlikely to signal its precise nature until it is ready for implementation.

In the meantime, for whatever reason, manipulation of the gold price could remain ongoing. Like the Gold Smash of April 2013, 415 tonnes of gold were sold in the first week of June 2012 while Federal Reserve Chairman Ben Bernanke was speaking. The price plunged by $50. When large quantities of

gold are sold (in this case a fifth of the annual production of 2,000 tonnes), usually by stealth, large volatile movements in the price are created. If gold bugs seem to be beleaguered and prone to conspiracy theories, this is why, though the truth of the matter may soon be to hand. In early March 2013, a U.S. regulator, the Commodity Futures Trading Commission, was reportedly discussing whether price fixing was a factor in setting the daily price of gold. Like the Libor rate, which is set daily by several banks, the price of gold is set twice daily by Barclays, Deutsche Bank, HSBC, Bank of Nova Scotia, and Société Générale.[53]

Another risk is the fact that the IMF has confirmed that some gold ETFs are not to be trusted. It likened the sector, which has amassed a volume of almost $1,200 U.S. billion, to the subprime sector. Another risk is confiscation (see discussion of Black Swans in appendix A), although when Roosevelt confiscated investors' physical gold, they were able to purchase mining shares in the stock market. A gold bubble is another possibility, but this will happen only when everyone, institutions as well as private citizens, is buying gold. Reaching the top of its inflation-adjusted peak is another risk. In 2013, the market is nowhere near these peaks. Similarly, a Chinese collapse could be very negative for gold. It needs twenty-five million jobs a year to sustain its economic miracle and a shake out is due.

Stöferle concludes that, at a time of chronic uncertainty, gold provides an answer. John Budden is more specific: he sees it as a hedge against devaluing currencies. The eurozone is financially, economically, and politically besieged; the U.S. dollar is losing its status as the globe's reserve currency. Expansion of the global monetary supply is merely feeding the next crisis, even though wealth creation is a function of savings and investments, not consumption and debt. The problem of excessive debt, which has been neither written off nor paid off but simply transferred, means chronic uncertainty will persist, creating an environment in which gold will thrive.

My Conclusion

Gold always has the measure of paper money.

–WILLIAM REES-MOGG[54]

It is verifiably certain that a gold standard minimizes inflation but, importantly, without affecting price fluctuations resulting from the productivity gains and losses that produce clean price signals that help consumers make well-informed purchases. That is, prices still go up and down but for sound

economic reasons that producers and consumers can understand and for which they can prepare. This, plus the achievements of the classical gold standard period (1880–1913) in terms of industrialization, trade liberalization, and institutional coherence, makes a restoration of the gold standard very attractive. Throw in the added benefits of restraining government spending while promoting interest-rate stability, which encourages people to save to spend rather than borrow to spend (thus providing a base of savings upon which healthy credit and, therefore, economic expansion can take place), and the argument tips even more favourably in the direction of establishing a gold standard. Finally, given vast reserves of gold bullion, many governments may offset their debt levels with well-priced gold, but this should be undertaken only in a way that avoids creating moral hazard by governments that want the price of gold changed every time an expanded money supply is needed to mask their imprudence.

Because so little transparency exists in the gold-trading platforms, the conclusion that this masks rampant manipulation of the markets is unavoidable. As power brokers, policy-makers may feel this is in the nature of "realpolitik," a necessary evil, but they must also be aware that such actions create the very conditions they hope to prevent. After all, capital flight, bank runs, and gold hoarding result from the failure of governments and institutions to maintain trust. Moreover, while the asset sales and purchases of George Soros and Warren Buffett are common knowledge, vast sums of money and gold pass through bullion banks behind a veil of secrecy creating conditions in which ordinary investors lose while insiders profit, injecting a sense of moral outrage into a soup already toxic with fear and distrust. Finally, the economies of the world's major gold-producing countries, which include Canada and Australia, are losing out because of market gyrations. They must soon speak up on behalf of an industry that is being affected in such an unseemly manner at a time when gold resource depletion, as with other resources, is becoming a critical issue. Gold is not going away. As it becomes scarcer, its value will only rise.

Since the onset of the current Kondratieff Winter in 2000 until August 2011, gold has been a good investment. Historical, fundamental, technical, and seasonal analysis may help offset investor fears surrounding its volatility, particularly where mining stocks are concerned and, to some extent, bullion, the price of which tends to mirror the price of gold. Stocks, in any case, may have to wait until a Dow bottom has been established, though bargains are available in sound junior and mid cap mining companies if you and/or your

advisor are good stock pickers and you are willing to invest for the long term and can withstand the volatility produced by day trading. Seasonal analysis comes in two forms: annual, favoured by most market timers, and the Kondratieff Seasons. According to Ian Gordon of Longwave Analysis, the K-Summer and K-Winter are most favourable for gold. Budden points out that there will be no bubble in gold until more than 30 percent of the Toronto Stock Exchange is invested as it was in Nortel.[55] And, in an e-mail note sent March 7, 2013, to friends and clients, he noted that the U.S. dollar index was currently at $82.47, 12.25 percent above its August/September 2011 lows. Gold, on the other hand, was down from its August/September 2011 highs of $1,900 by just over 16.5 percent. In other words, gold was holding its value, just as it has for some three hundred and fifty years.[56]

APPENDIX C

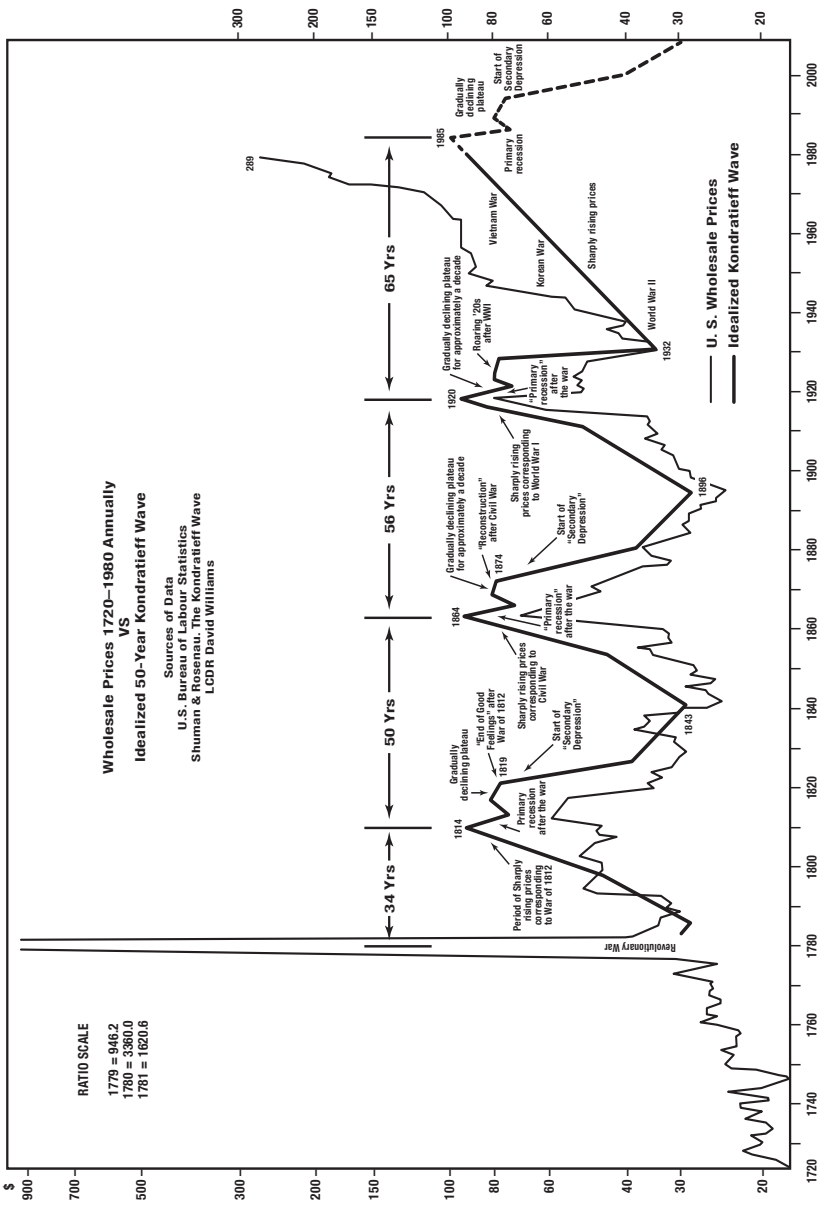
Charts

A. Kondratieff's Four Long-Wave Cycles:

Five Interpretations, Plus a Projection of the Forthcoming Fifth Long Wave

Figure A1 / Wholesale Prices 1720–1980 Annually vs. Idealized 50-Year Kondratieff Wave

While Kondratieff used price points of the leading economies of his era, the chart to the right, first published in 1982, combines the Kondratieff long wave and American price points. It and different versions of it are probably the most widely referenced long-wave charts on the internet. In the charts that follow, the reader will see how refinements to long-wave scholarship and analysis have progressed and remain ongoing. Like those under way in the global economy, convergences will be the likely result.



Source: Williams, LCdr. David. *Financial Astrology*. Tempe, AZ: American Federation of Astrologers, 1984: 177. Refurbished and reprinted here by permission of Nick Laird, www.sharelynx.com, free pdf download at <http://www.traders-software.com/Free%20Download/David%20Williams%20-%20Financial%20Astrology/>.

Figures A2.1–A2.4 / Nathan H. Mager's Anatomy of Four Waves

Mager's "anatomies" of Kondratieff's four long waves, published in 1987, demonstrate how U.S. price points are smoothed out and translated in the Kondratieff Wave. The Warren and Pearson commodity prices to the left are of particular interest as the work of these academics, "Wholesale Prices in the United States for 135 Years, 1797 to 1932" and *Gold and Prices*, informed Franklin Delano Roosevelt's economic approach to the Great Depression and the repricing of gold to overcome deflation. Also note in the Third Wave how, following the 1937 recession, the United States' successes in the war effort gave it a head start in the Kondratieff Spring of the Fourth Wave, while Europe languished in a K-Winter that didn't end until well after WWII.

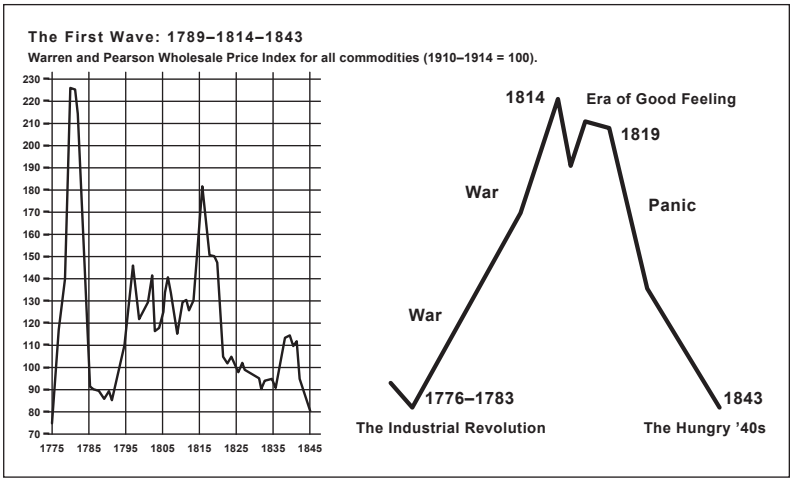


Figure A2.1

Source: Mager, Nathan H. *The Kondratieff Waves*. New York: Praeger Publishers, 1987: 73. Reprinted by permission.

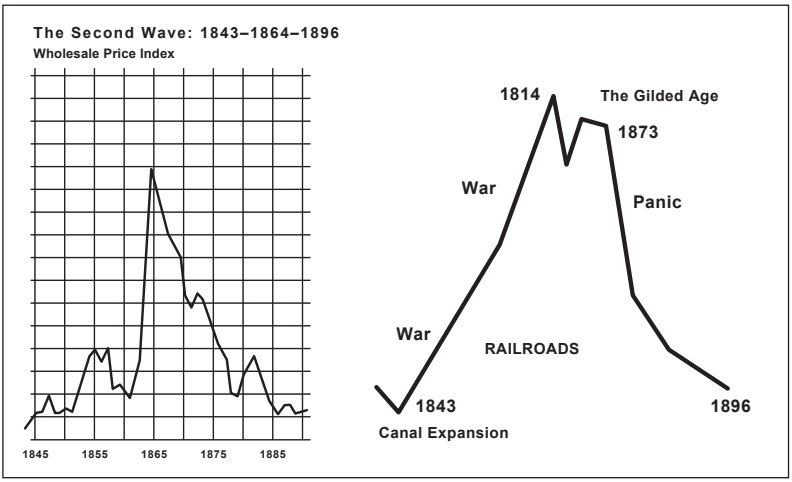


Figure A2.2

Source: Mager, Nathan H. *The Kondratieff Waves.* New York: Praeger Publishers, 1987: 85. Reprinted by permission.

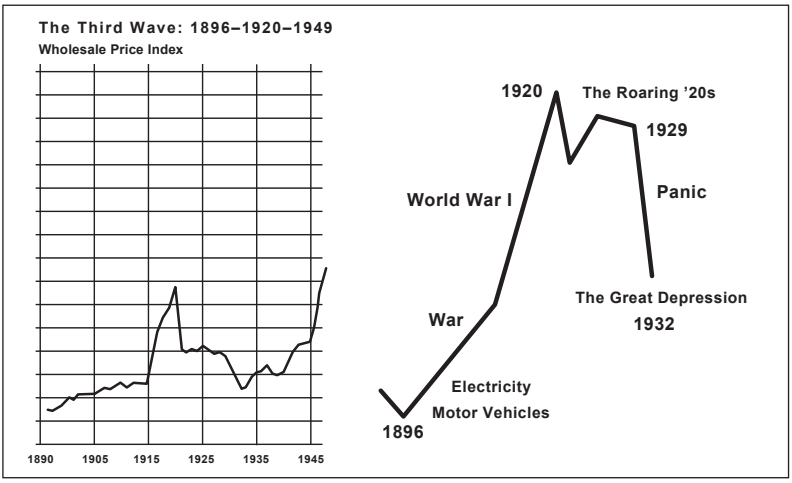


Figure A2.3

Source: Mager, Nathan H. *The Kondratieff Waves.* New York: Praeger Publishers, 1987: 101. Reprinted by permission.

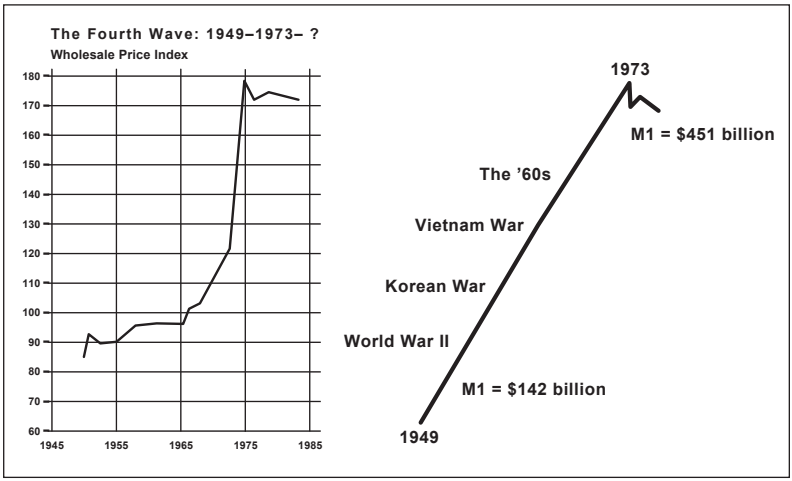
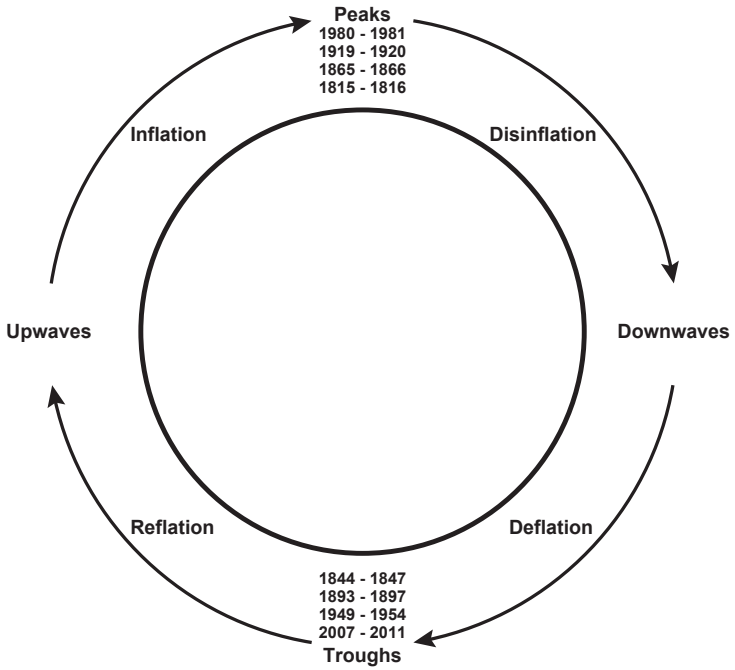


Figure A2.4

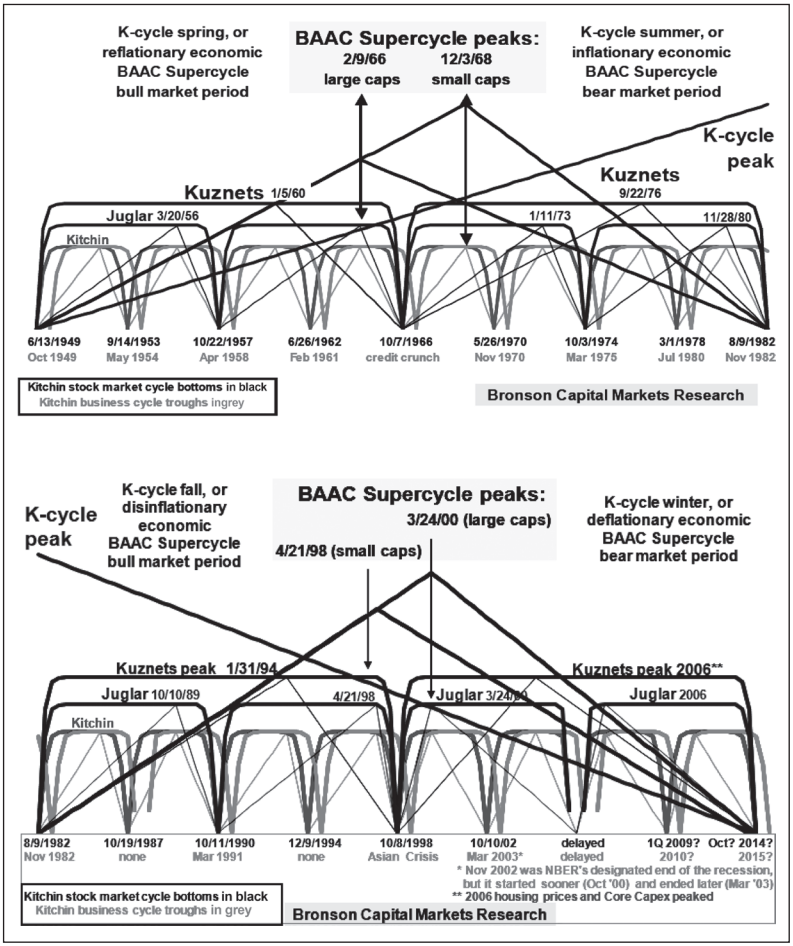
Source: Mager, Nathan H. *The Kondratieff Waves*. New York: Praeger Publishers, 1987: 141. Reprinted by permission.

Figure A3 / Brian J. L. Berry's Long-Wave Clock



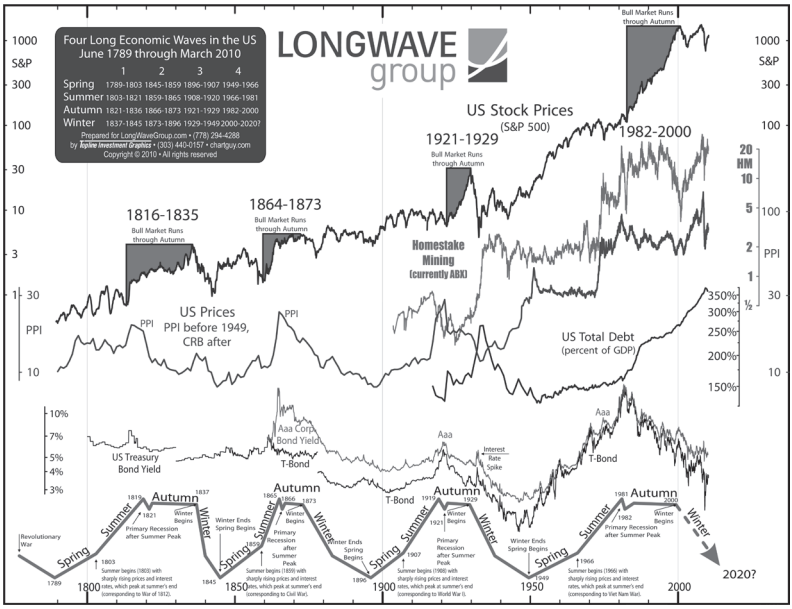
Source: Berry, Brian J. L and Denis J. Dean. "Long Wave Rhythms: A Pictorial Guide to 220 Years of U.S. History, with Forecasts." In Grinin, L., T. Devezas, and A. Korotayev, eds. *Kondratieff Waves*. Volograd: Uchitel Publishing House for the Russian Academy of Sciences, Institute of Economics, International N. D. Kondratieff Foundation: 2012. Reprinted by permission.

Figure A4 / Bronson K-Cycle Model 1949–2014/5 with Kondratieff, Kuznets, Juglar, and Kitchin Cycles



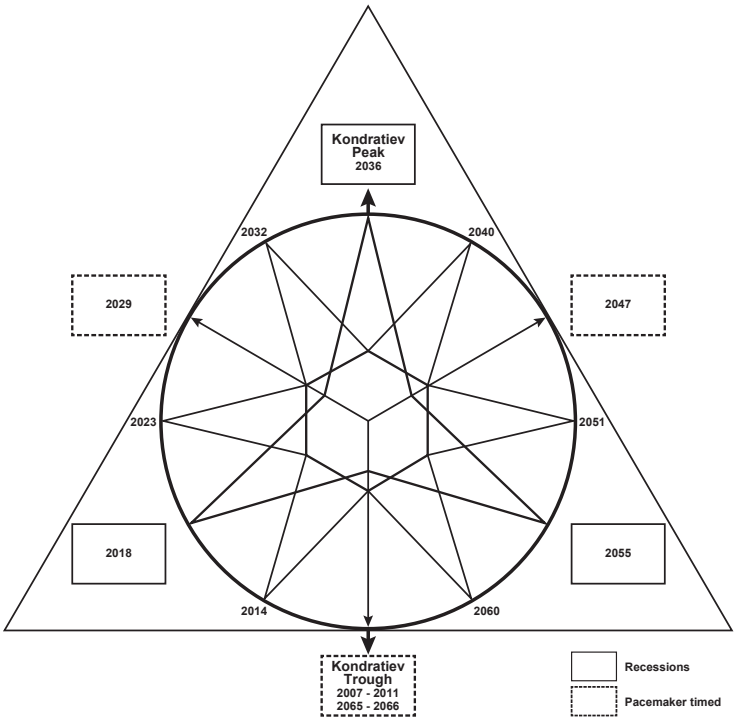
Source: Bronson, Bob. "A Forecasting Model That Integrates Multiple Business and Stock-Market Cycles." Bronson Capital Markets Research, January 13, 2008, p. 5. Updated by Bob Bronson and reprinted by permission.

Figure A5 / Longwave Analyst Four Kondratieff Waves in the U.S.



Source: Longwave Analyst <http://www.longwavegroup.com/market/charts/_pdf/Kondratieff_Cycle_Chart.pdf>. Reprinted by permission.

Figure A6 / Brian J. L. Berry's Projected Fifth Long-Wave Cycle/Clock



Source: Berry, Brian J. L and Denis J. Dean. "Long Wave Rhythms: A Pictorial Guide to 220 Years of U.S. History, with Forecasts." In Grinin, L., T. Devezas, and A. Korotayev, eds. *Kondratieff Waves*. Volograd: Uchitel Publishing House for the Russian Academy of Sciences, Institute of Economics, International N. D. Kondratieff Foundation: 2012. Reprinted by permission.

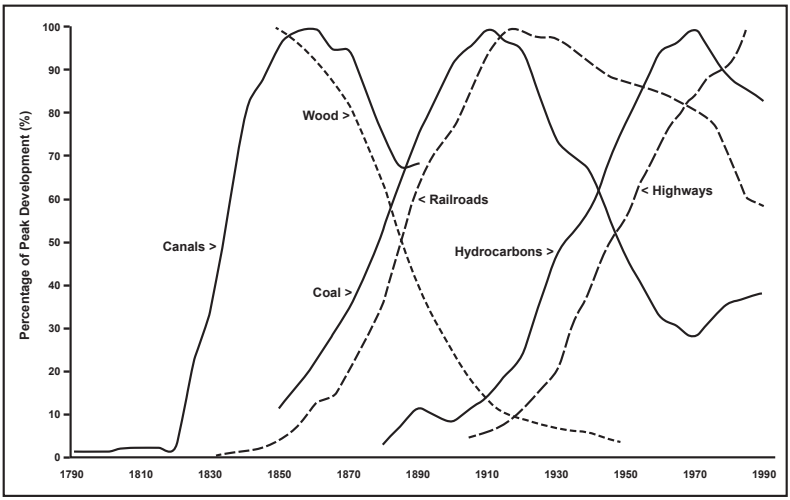
B. Successive Technological Systems

In the following two charts, Professor Brian J. L. Berry illustrates the rise and fall of successive technological systems occurring from 1780 to 1990.

The first chart illustrates the mileage of U.S. canal, railroad, and highway networks as they peaked and declined, while their energy sources similarly peaked and declined as a maximum share of the nation's energy budget. The information technology system/era, not shown in these charts, followed the era of highways and hydrocarbons, and is projected to reach its inflationary peak by 2030.

The second chart demonstrates how those technological systems grew from 50 percent deployment in K-wave troughs (T) for maximum deployment in the decade preceding inflationary spirals at Kondratieff peaks (P).

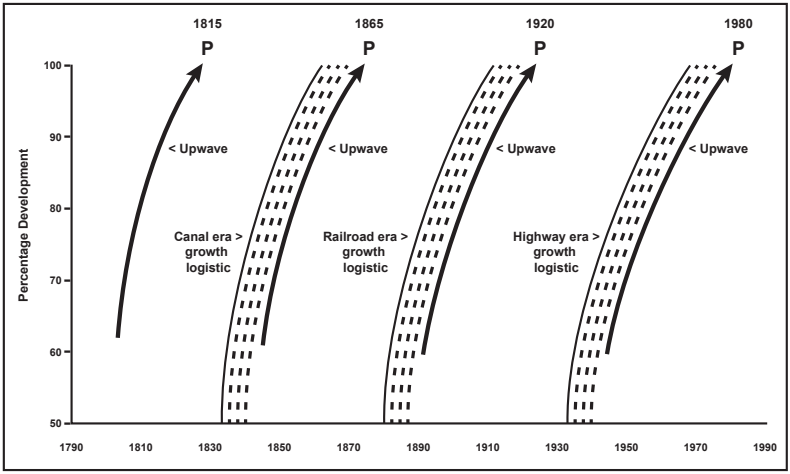
Figure B1 / The Rise and Fall of Successive Technological Systems



Source: Berry, Brian J. L., Euel Elliott, Edward J. Harpham, and Heja Kim. *The Rhythms of American Politics*. New York: University Press of America, 1998: 20. Reprinted by permission.

Figure B2 / Upwaves Driven by Growth Logistics

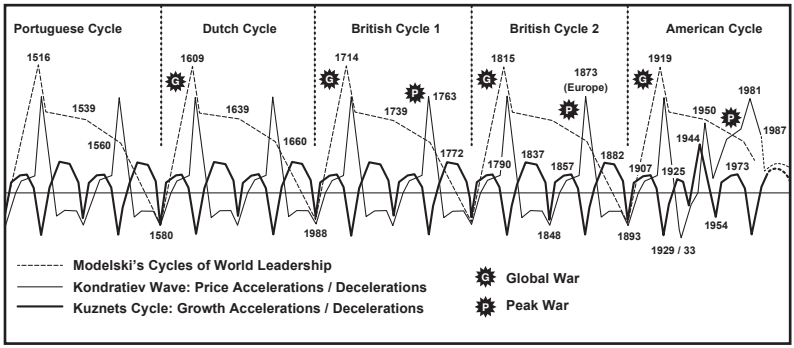
What will follow the info-tech era? In order for the next technological system (the next "New Economy") to take root, new, inexpensive energy sources as well as transformational (as opposed to merely "disruptive") technological innovations, production relations, and monetary systems are required. Without these, and despite heroic monetary and fiscal efforts that may or may not address issues around sovereign debt, de-industrialization, aging demographics, and a derivatives-clogged banking system, the global economy will languish in an extended Kondratieff Winter.



Source: Berry, Brian J. L., Euel Elliott, Edward J. Harpham, and Heja Kim. *The Rhythms of American Politics*. New York: University Press of America, 1998: 78. Reprinted by permission.

C. World-Leadership Cycles

Figure C / World-Leadership Cycles and the Kondratieff/Kuznets Rhythms



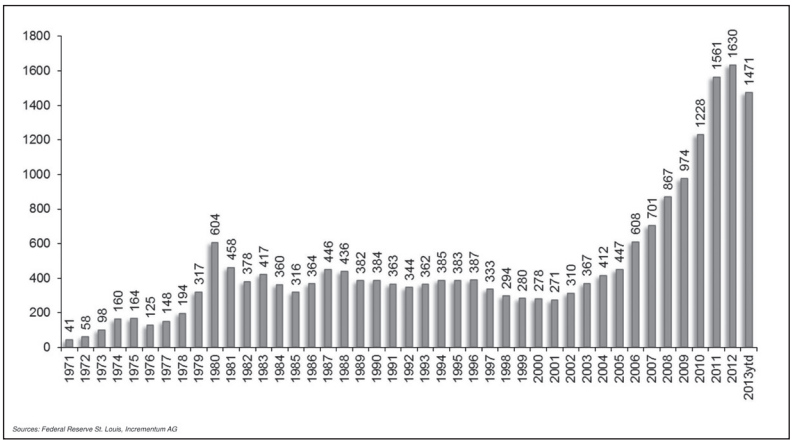
Source: Berry, Brian J. L. *Long-Wave Rhythms in Economic Development and Political Behavior*. London: The Johns Hopkins University Press, 1991: 161.© 1991 Johns Hopkins University Press. Reprinted with permission of Johns Hopkins University Press.

At his passing in 2014, George Modelski was Professor of Political Science Emeritus at George Washington University. In 2012, he received the Bronze Kondratieff Medal from the International N. D. Kondratieff Foundation. An authority in long-term geopolitical, economic, and world system cycles, he identified the cycle revealing how a hegemon usually rules for 115 years, or two Kondratieff waves. The British, who prevailed over two world-leadership cycles (four Kondratieff waves), were the exception. This chart, first published in 1991, identifies each hegemonic cycle and distinguishes global and peak wars but does not include trough wars, which arrive at or around the bottom of the K-cycle. In 2015, wars in the Middle East and in Ukraine and tensions between Pakistan and India over Kashmir are typical of trough wars. The question remains whether the United States can meet the challenges of the current Kondratieff Winter in order to prevail through another hegemonic cycle – a question that may not be decided until the next global war, probably in or around the years 2025 to 2035.

D. Diagnostic Economic Charts

Charts D1 through D21 are taken from Ronald-Peter Stöferle and Mark Valek. "Monetary Tectonics: Inflation Versus Deflation" Chartbook. Incrementum Liechtenstein, January 2014 <http://www.incrementum.li/en/research-analysis/monetary-tectonics-chartbook-about-gold-in-theinflation-vs-deflation-war/>. Reprinted by permission.

Figure D1 / Average Annual Gold Price

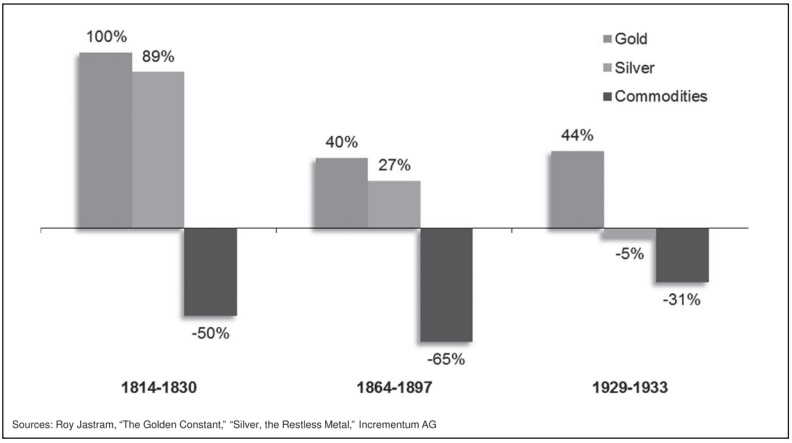


Source: Incrementum.II. Reprinted by permission.

Figure D2 / Comparison with Mid-Cycle Correction in 1970s

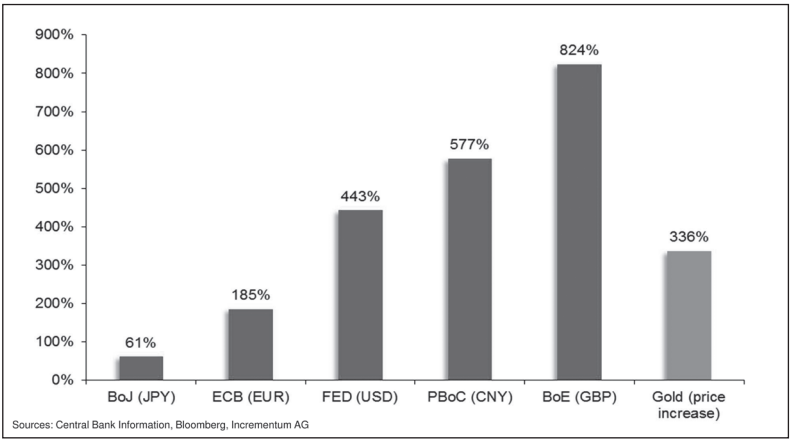
Source: Incrementum.II. Reprinted by permission.

Figure D3 / Gold, Silver, and Commodities During Deflation



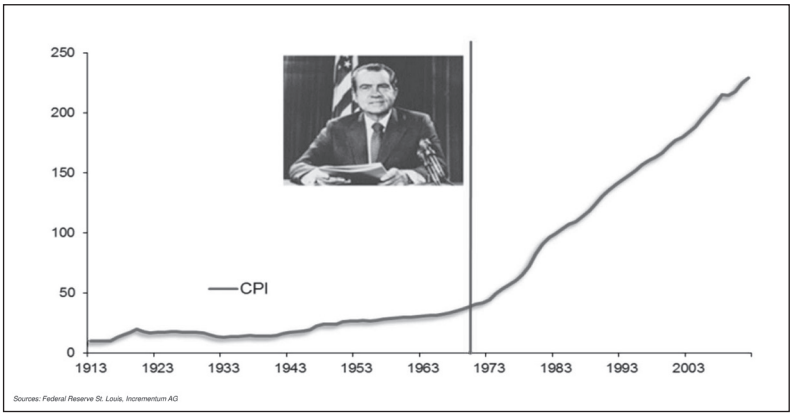
Source: Incrementum.II. Reprinted by permission.

Figure D4 / Change in Central Bank Balance Sheets + Gold Price Increase: January 2002 vs. August 2103



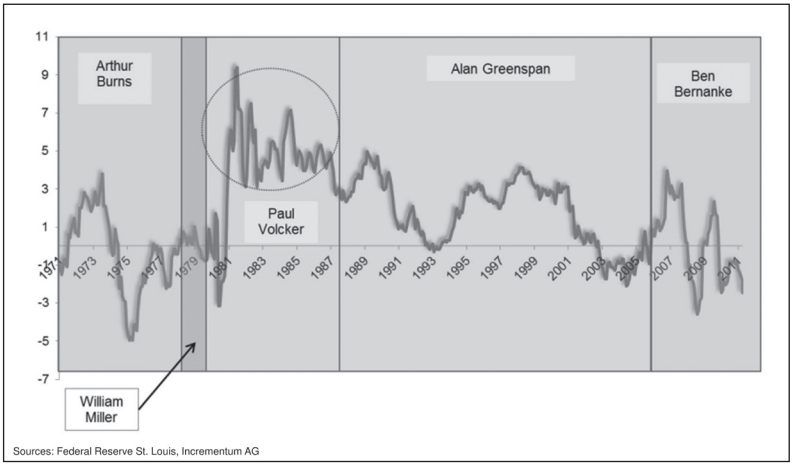
Source: Incrementum.II. Reprinted by permission.

Figure D5 / Consumer Prices in the U.S. Over the Past Century (CPI Indexed)



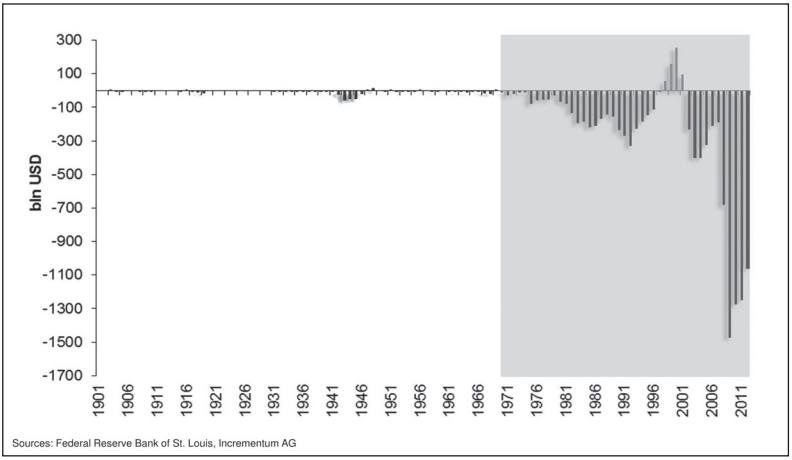
Source: Incrementum.II. Reprinted by permission.

Figure D6 / Real Interest Rates Post–Bretton Woods



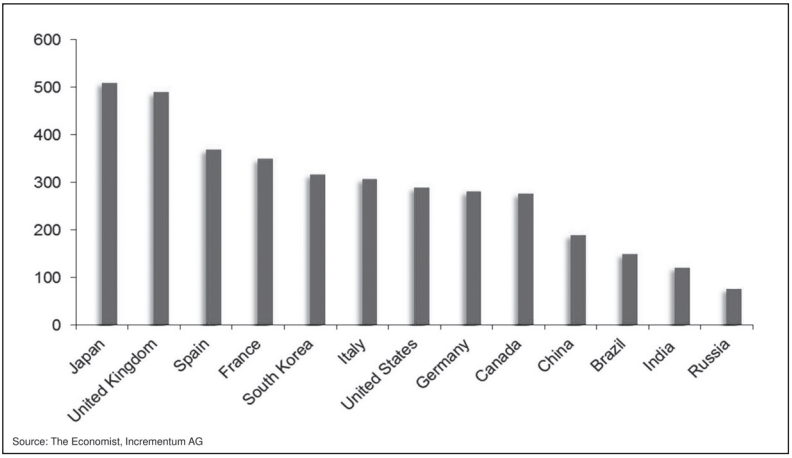
Source: Incrementum.II. Reprinted by permission.

Figure D7 / U.S. Budget: Surpluses and Deficits



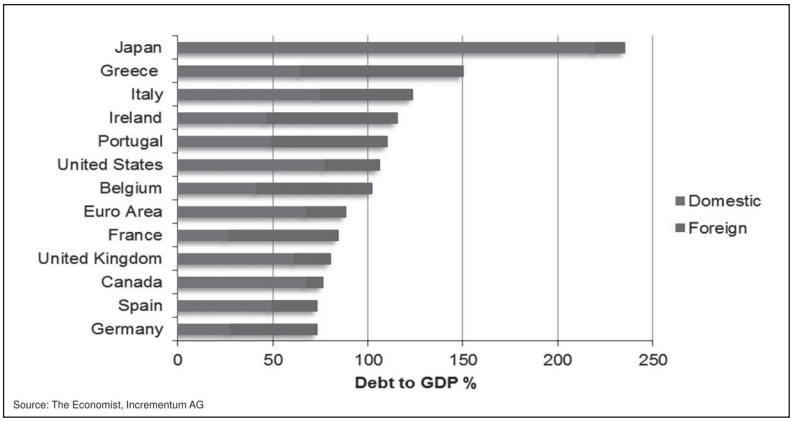
Source: Incrementum.II. Reprinted by permission.

Figure D8 / Government, Household, Financial, and Non-Financial Debt (% of GDP)



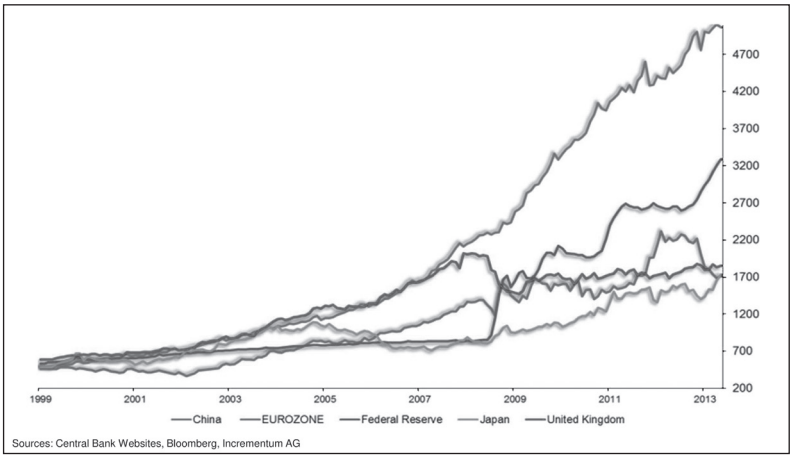
Source: Incrementum.II. Reprinted by permission.

Figure D9 / Domestic vs. Foreign Debt (% of GDP)



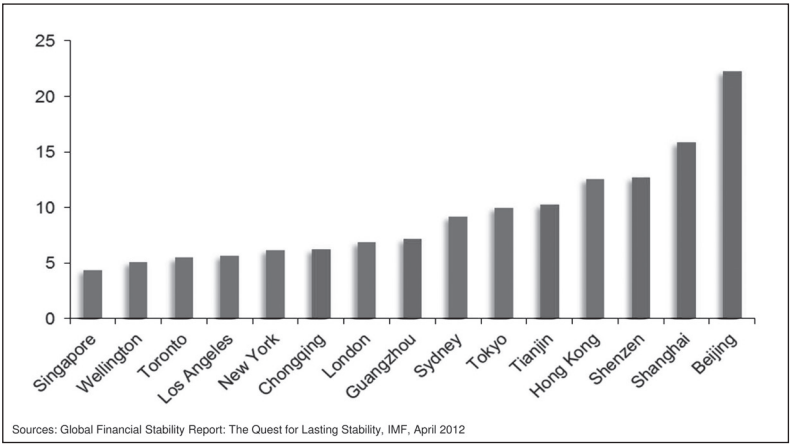
Source: Incrementum.II. Reprinted by permission.

Figure D10 / Development of the Monetary Base Since 1999 (USD bn.)



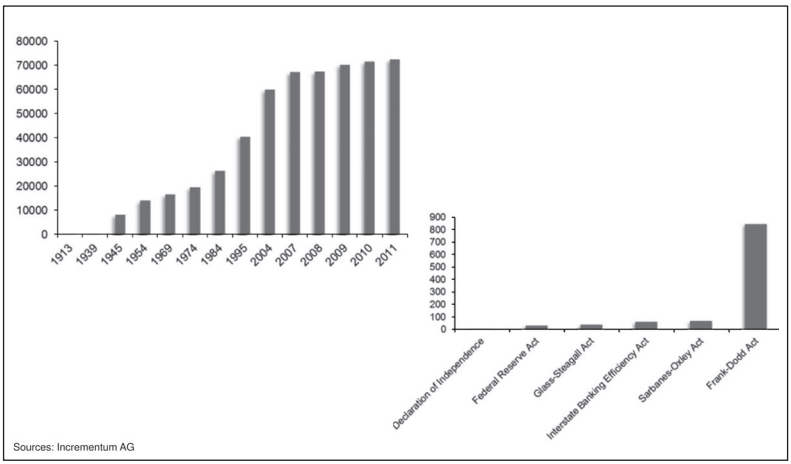
Source: Incrementum.II. Reprinted by permission.

Figure D11 / Housing Bubble in China? Ratio of House Prices to Annual Income



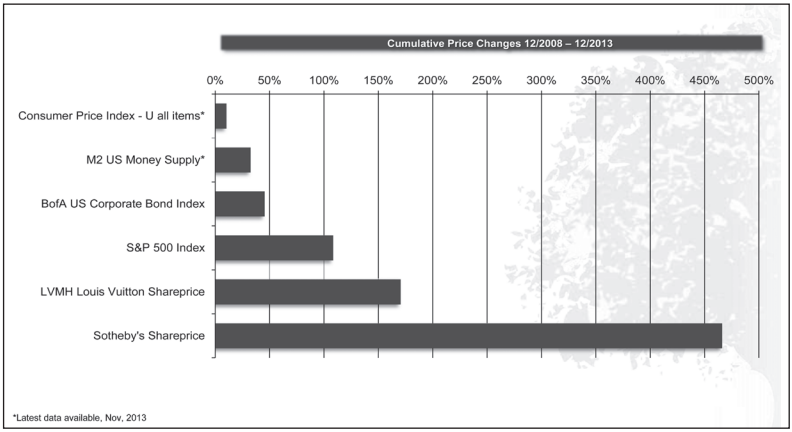
Source: Incrementum.II. Reprinted by permission.

Figure D12 / A Bull Market in Bureaucracy: Pages of U.S. Tax Law and Pages of U.S. Legislation



Source: Incrementum.II. Reprinted by permission.

Figure D13 / Where Did All the Money Go? Financial Assets and Luxury Goods Profit from Monetary Inflation

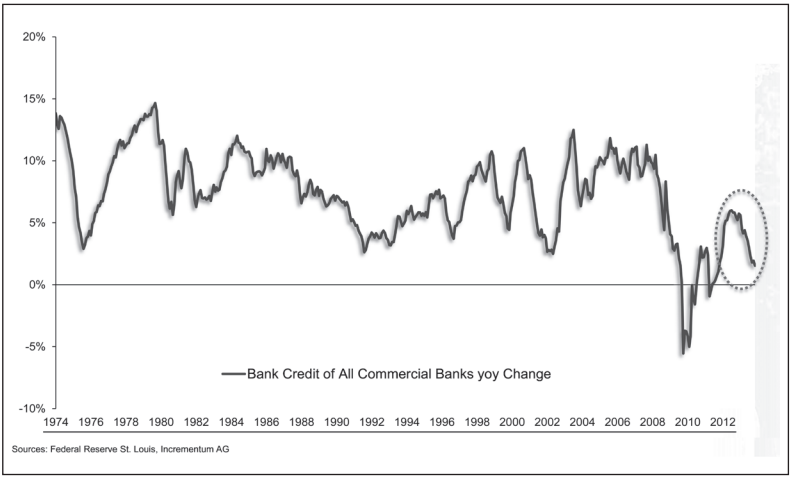


Sources: Federal Reserve St. Louis, Incrementum AG. Reprinted by permission.

Figure D14 / Tug of War: Inflation vs. Deflation

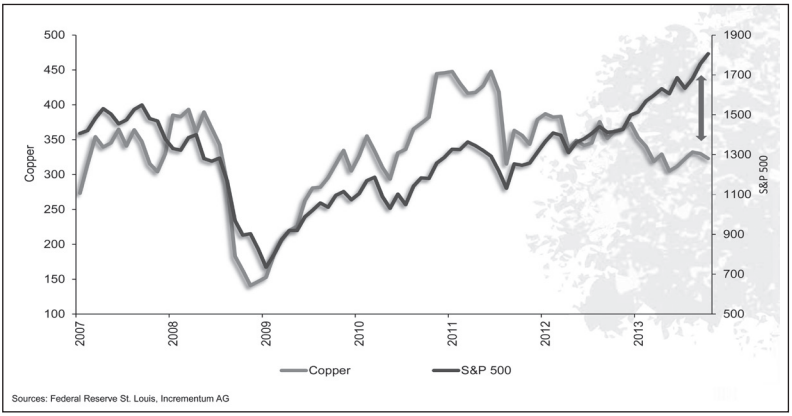
Source: Incrementum. Reprinted by permission.

Figure D15 / U.S. Bank Credit of All Commercial Banks yoy Change: Lending Growth Rate Decreasing



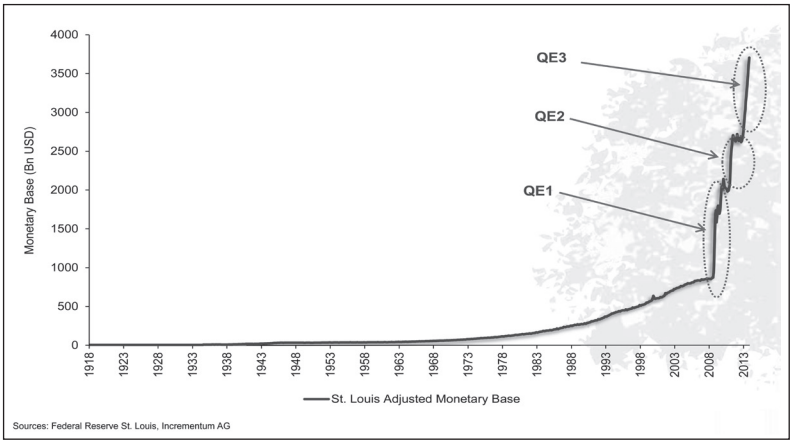
Sources: Federal Reserve St. Louis, Incrementum AG. Reprinted by permission.

Figure D16 / Copper yoy Change vs. S&P 500 yoy Change: Growing Divergence – Who's Right? Dr. Copper or Equities?



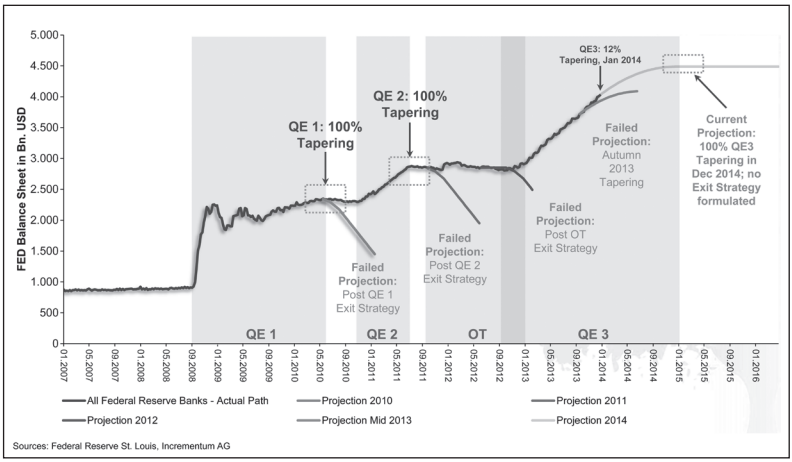
Sources: Federal Reserve St. Louis, Incrementum AG. Reprinted by permission.

Figure D17 / Monetary Base Since 1918



Sources: Federal Reserve St. Louis, Incrementum AG. Reprinted by permission.

Figure D18 / The History of UnderQEstimation: Is This Time Really Different?



Sources: Federal Reserve St. Louis, Incrementum AG. Reprinted by permission.

Figure D19 / Monetary Regimes and Price Inflation: Price Deflation Was Common Before the Fed Was Established

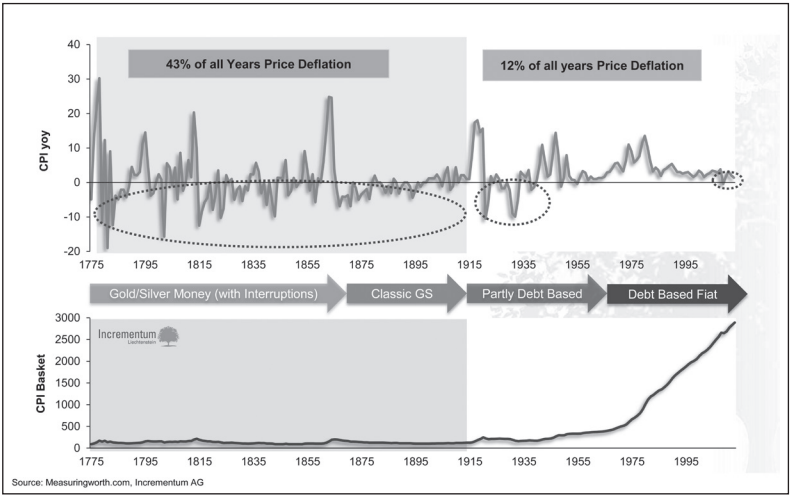


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Figure D20 / Von Mises on Inflation

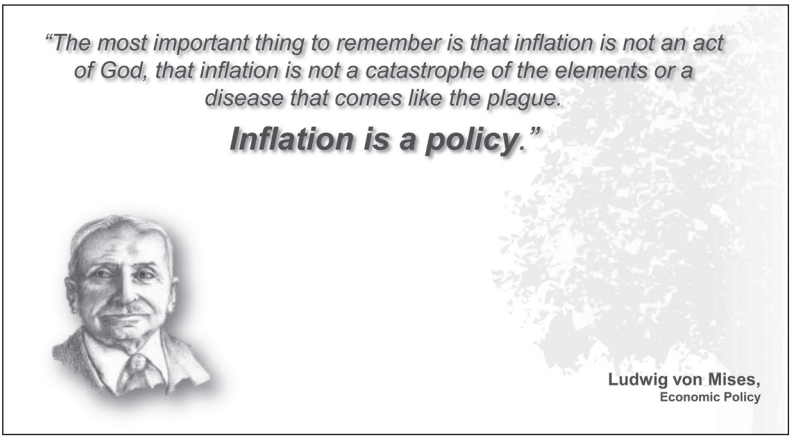

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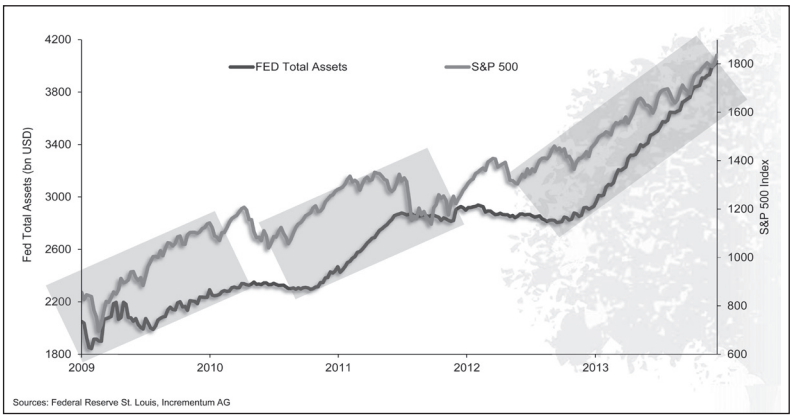
Figure D21 / QE and S&P 500: The Wealth Effect Is Working … at Least for the Wealthy



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E. Long-Wave Charts

Charts E1 through E7 are selected from Ian Gordon's Longwave Group website <http://www.longwavegroup.com/market/charts/charts.php> and are reprinted by permission.

Figure E1 / Flight to Liquidity During a Long-Wave Winter Debt Collapse

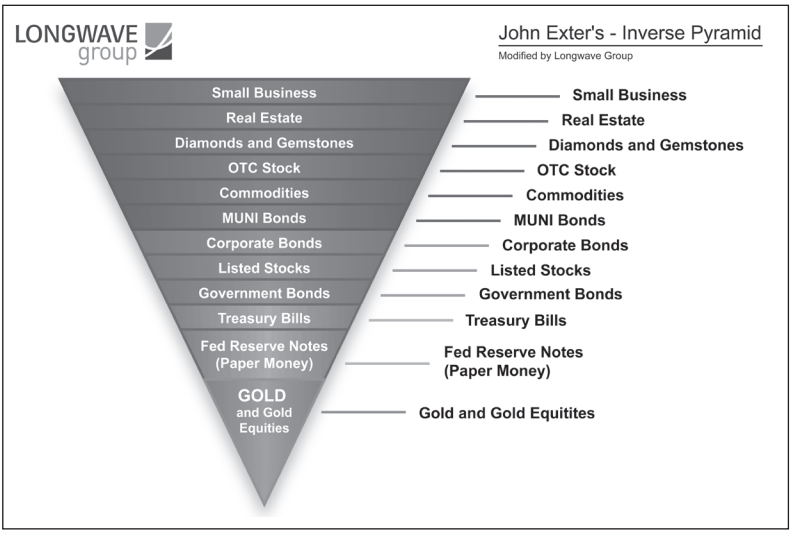

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Figure E2 / Lifetime Economic, Financial, and Investment Map

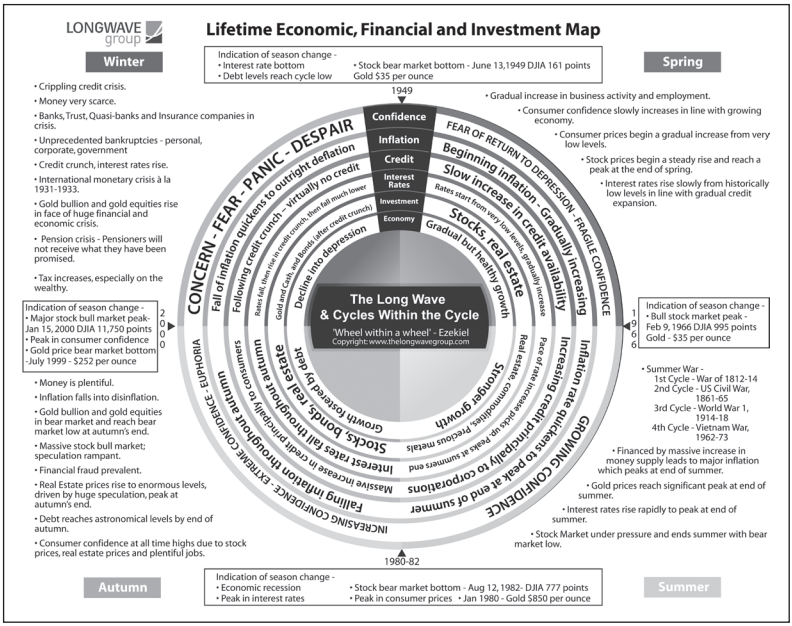

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Figure E3 / U.S. Total Debt and Total Debt as Percentage of GDP

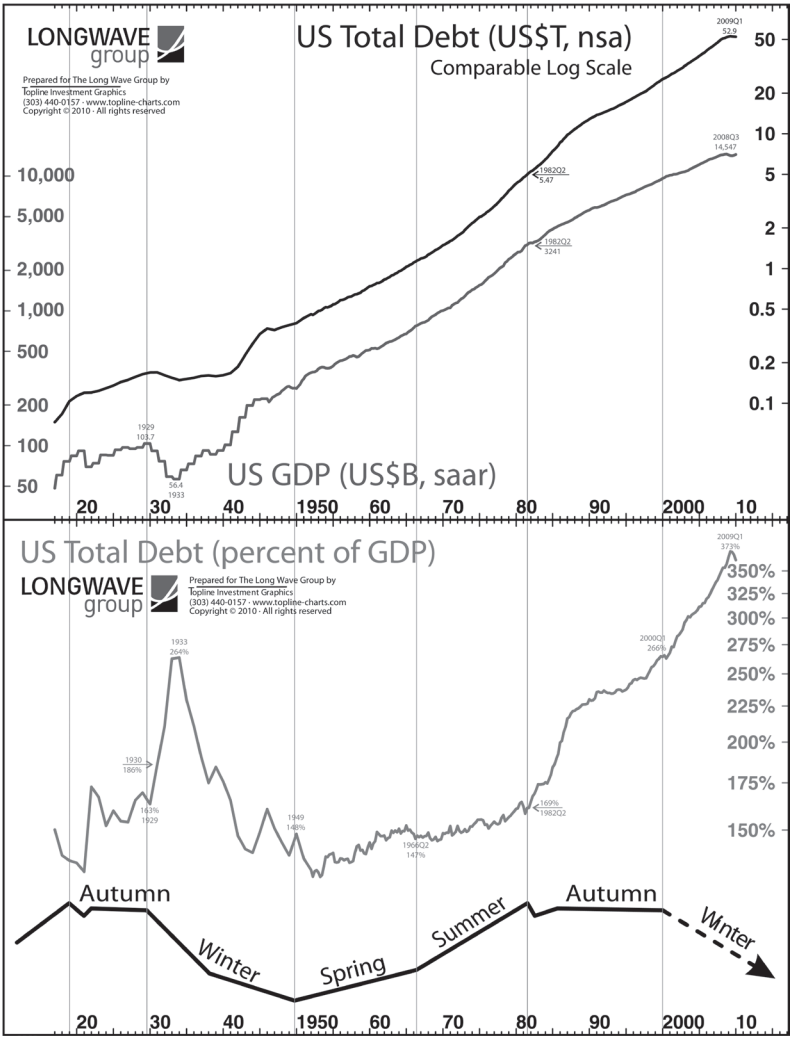

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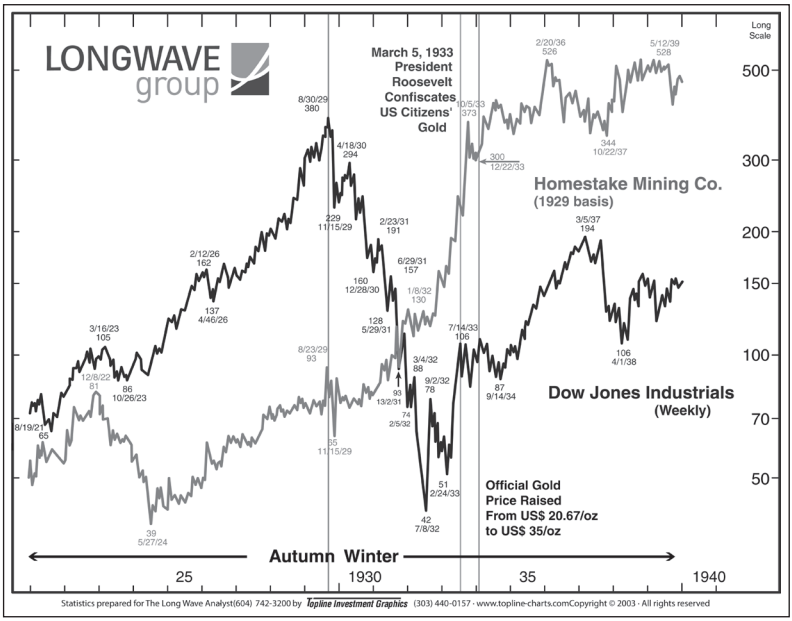
Figure E4 / Homestake Mining and DJIA 1921 through 1940



Source: Longwave Group. Reprinted by permission.

Figure E5 / Anatomy of a Bull and Bear Market with Money Flow and Investors' Participation

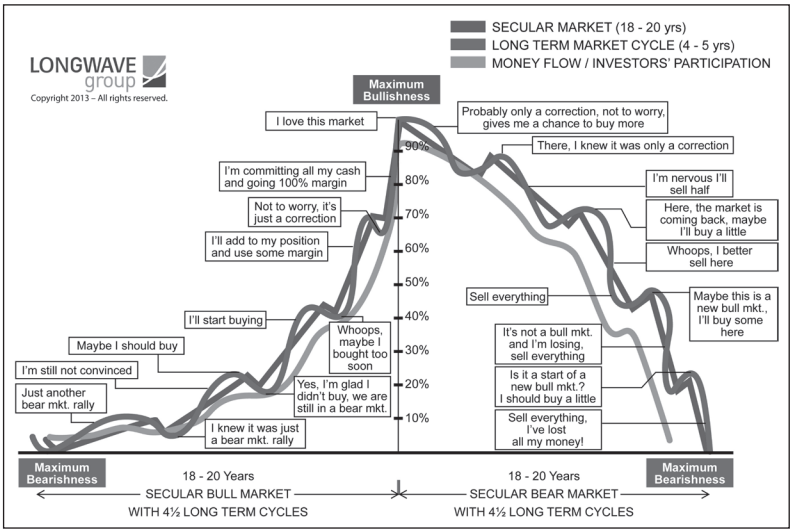


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Figure E6 / The Four Long-Wave Seasons and Five Secular Cycle Markets

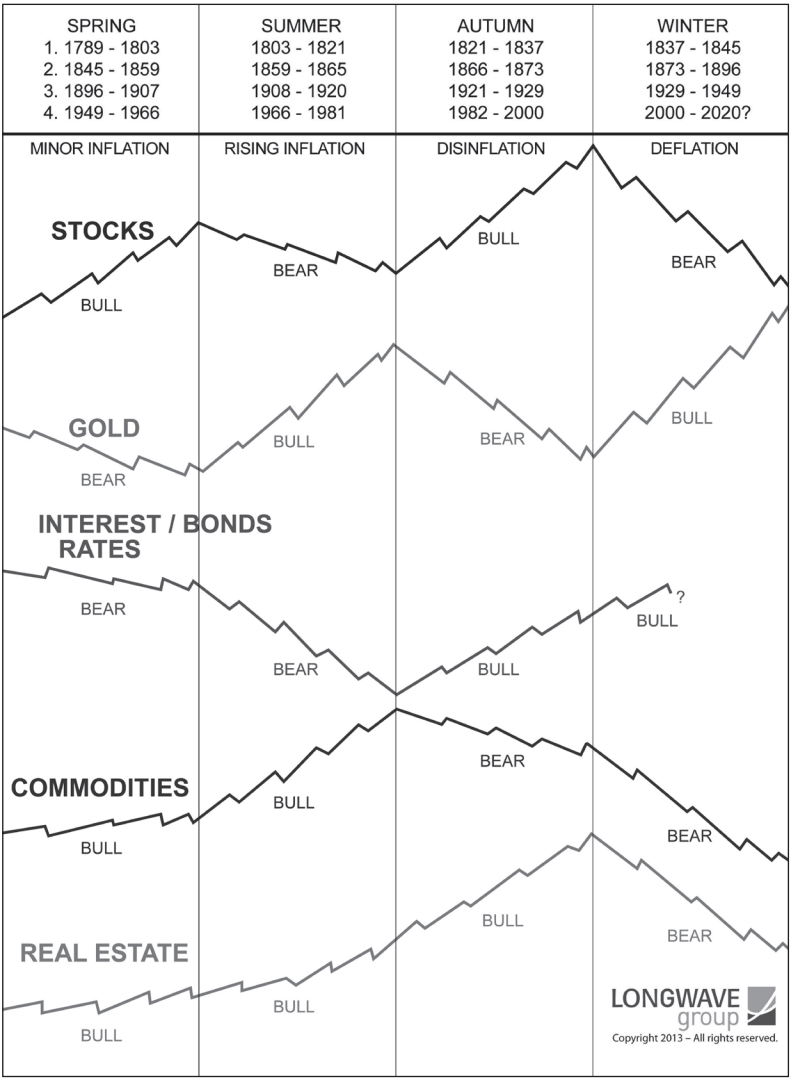

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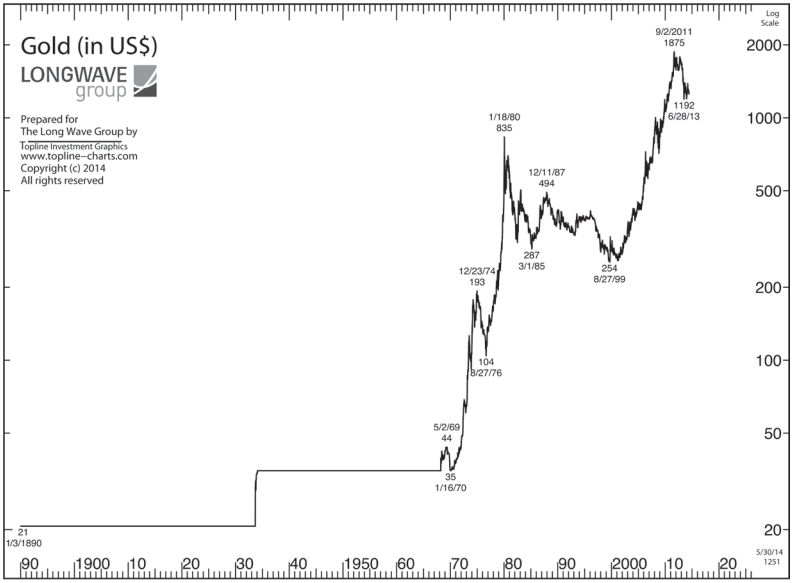
Figure E7 / Gold (in US$)



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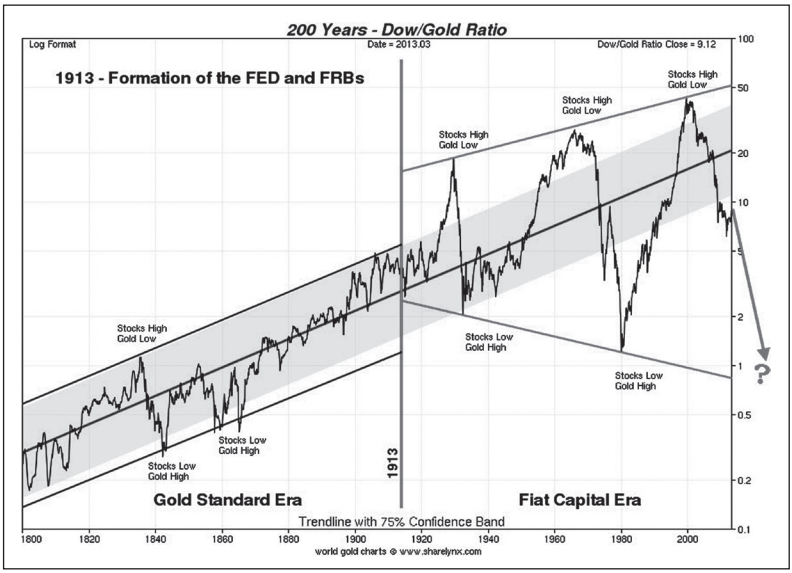
F. Dow-Gold Ratio

Figure F / Two Hundred Years of the Dow-Gold Ratio



Source: Free chart from www.sharlynx.com <http://www.sharelynx.com/chartstemp/DowGoldRatio.php>.

G. Official Gold Holdings

WORLD OFFICIAL GOLD HOLDINGS					
International Financial Statistics, February 2015*					
Country	Tonnes	% of reserves**	Country	Tonnes	% of reserves**
1 United States	8,133.5	72.6%	51 Malaysia	35.8	1.2%
2 Germany	3,384.2	67.8%	52 Peru	34.7	2.1%
3 IMF	2,814.0	[1]	53 Slovakia	31.7	46.9%
4 Italy	2,451.8	66.6%	54 Azerbaijan	30.2	7.4%
5 France	2,435.4	65.6%	55 Syria	25.8	5.7%
6 Russia	1,208.2	12.2%	56 Ukraine	23.6	12.2%
7 China	1,054.1	1.0%	57 Sri Lanka	22.5	9.9%
8 Switzerland	1,040.0	7.7%	58 Morocco	22.0	3.9%
9 Japan	765.2	2.4%	59 Afghanistan	21.9	11.2%
10 Netherlands	612.5	55.2%	60 Nigeria	21.4	1.8%
11 India	557.7	6.7%	61 Serbia	17.5	5.6%
12 Turkey[6]	529.1	16.1%	62 Jordan	17.1	4.1%
13 ECB	503.2	26.5%	63 Cyprus	13.9	60.1%
14 Taiwan	423.6	3.9%	64 Bangladesh	13.8	2.4%
15 Portugal	382.5	75.3%	65 Cambodia	12.4	7.8%
16 Venezuela	367.6	69.3%	66 Qatar	12.4	1.1%
17 Saudi Arabia	322.9	1.7%	67 Ecuador	11.8	11.6%
18 United Kingdom	310.3	11.2%	68 Czech Republic	10.6	0.8%
19 Lebanon	286.8	21.5%	69 Colombia	10.4	0.9%
20 Spain	281.6	21.7%	70 Laos	8.9	31.4%
21 Austria	280.0	43.4%	71 Ghana	8.7	7.4%
22 Belgium	227.4	34.7%	72 Tajikistan	8.6	66.4%
23 Philippines	195.1	9.6%	73 Paraguay	8.2	4.5%
24 Kazakhstan	191.8	25.7%	74 Mauritius	7.9	7.8%
25 Algeria	173.6	3.5%	75 Myanmar	7.3	3.8%
26 Thailand	152.4	3.8%	76 El Salvador	7.3	9.3%
27 Singapore	127.4	1.9%	77 Guatemala	6.9	3.6%
28 Sweden	125.7	7.8%	78 Macedonia	6.8	8.7%
29 South Africa	125.2	9.9%	79 Tunisia	6.8	3.5%
30 Mexico	122.7	2.4%	80 Latvia	6.6	8.0%
31 Libya	116.6	4.6%	81 Ireland	6.0	13.0%
32 Greece	112.4	69.9%	82 Lithuania	5.8	2.6%
33 BIS[2]	111.0	[1]	83 Mozambique	5.4	6.7%
34 Korea	104.4	1.1%	84 Nepal	4.9	13.0%
35 Romania	103.7	9.3%	85 Bahrain	4.7	3.0%
36 Poland	102.9	4.0%	86 Brunei Darussalam	4.3	4.6%
37 Iraq	89.8	5.0%	87 Kyrgyz Republic	3.9	7.8%
38 Australia	79.9	5.7%	88 Slovenia	3.2	12.1%
39 Kuwait	79.0	8.7%	89 Aruba	3.1	17.3%
40 Indonesia	78.1	2.7%	90 Hungary	3.1	0.3%
41 Egypt	75.6	19.0%	91 Bosnia and Herzegovina	3.0	2.4%
42 Brazil	67.2	0.7%	92 Canada	3.0	0.2%
43 Denmark	66.5	3.4%	93 Mongolia	2.9	6.7%
44 Pakistan	64.5	17.5%	94 Luxembourg	2.2	10.1%
45 Argentina	61.7	7.6%	95 Hong Kong	2.1	0.0%
46 Finland	49.1	17.8%	96 Iceland	2.0	1.8%
47 Bolivia	42.5	10.6%	97 Papua New Guinea	2.0	3.0%
48 Belarus[4]	42.4	32.5%	98 Trinidad and Tobago	1.9	0.6%
49 Bulgaria	40.1	7.7%	99 Haiti	1.8	5.8%
50 WAEMU[3]	36.5	11.0%	100 Albania	1.6	2.3%

Source: Free chart from www.sharlynx.com <http://www.sharelynx.com/chartstemp/DowGoldRatio.php>

The International Monetary Fund maintains statistics of national assets as reported by various countries. These data are used by the World Gold Council to periodically rank and report the gold holdings of countries and official organizations.

The gold listed for each of the countries in this table may not be physically stored in the country listed, as central banks generally have not allowed independent audits of their reserves.[1]

WORLD OFFICIAL GOLD HOLDINGS		
International Financial Statistics, February 2015*		
	Tonnes	% of reserves**
World[7]	31,977.6	1)
Euro Area (incl. ECB)	10,784.1	56.1%
CBGA 4 signatories[5]	11,949.8	34.7%

NOTES

* This table was updated in February 2015 and reports data available at that time. Data are taken from the International Monetary Fund's International Financial Statistics (IFS), February 2015 edition, and other sources where applicable. IFS data are two months in arrears, so holdings are as of December 2014 for most countries, November 2014 or earlier for late reporters. The table does not list all gold holders: countries that have not reported their gold holdings to the IMF in the last six months are not included, while other countries are known to hold gold but not report their holdings publicly. Where the WGC knows of movements that are not reported to the IMF or misprints, changes have been made.

** The percentage share held in gold of total foreign reserves, as calculated by the World Gold Council. The value of gold holdings is calculated using the end of month London PM fix gold price published daily by The London Gold Market Fixing Ltd. In December the end of month gold price was $1206. Data for the value of other reserves are taken from the IFS table Total Reserves Minus Gold.

1. Bank for International Settlements (BIS) and International Monetary Fund (IMF) balance sheets do not allow this percentage to be calculated. In the case of any countries, up to date data for other reserves are not available.

2. BIS data are updated each year from the BIS's annual report to reflect the Bank's gold investment assets excluding any gold held in connection with swap operations, under which the Bank exchanges currencies for physical gold. The Bank has an obligation to return the gold at the end of the contract.

3. West African Economic Monetary Union including the central bank.

4. Includes only "Monetary gold" as of February 2014.

5. Signatories to the fourth Central Bank Gold Agreement, which commenced in September 2014. The signatories include: ECB, Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland.

6. Gold has been added to Turkey's balance sheet as a result of a policy accepting gold in its reserve requirements from commercial banks. Please see this link for information on this policy action: <http://www.tcmb.gov.tr/wps/wcm/connect/57c5777d-1f48-4eb4-98ba-af4c6aaddc20/ANO2012-38.pdf?MOD=AJPERES&CACHEID=57c5777d-1f48-4eb4-98ba- af4c6aaddc20>.
7. World total as calculated by the IMF. This figure will not reconcile with the country-level data provided due to difference in how the BIS gold holdings are captured.

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APPENDIX D

Situational

If you saw the price of your home fluctuating many thousands of dollars in a day, what would you do? Sell? No you wouldn't, because your house is your home and a core wealth asset, and, fortunately, you don't see real-time prices flashing by. Instead, you gauge its worth by the stability of your country and currency and, of course, the pleasure you derive from living there. Seeing constant price changes accentuates your emotions. What is psychologically different between real estate and stocks?

In the case of sensible residential real estate that has the right balance of invested equity and mortgage encumbrance, your home should be a long-term and passive asset. This is key both to its affordability and its retaining its value as an investment through the Kondratieff Winter. Stocks are another matter because extreme volatility prompts greed and fear and both these emotions feed on themselves, leading investors to capitulate at exactly the wrong time.

In the stock market you should act counter-intuitively to the feeling in your stomach. You should be selling when your greed and confidence are running wild and you should be buying when you have reached the puking point. This is easier said than done.

–JOHN BUDDEN[1]

It is beyond the scope of this book to consider the day-to-day aspects of maintaining a portfolio; besides, many excellent books, foremost among them the classic *The Intelligent Investor* by Benjamin Graham, ably tackle this subject. Our task is to help the reader understand the macroeconomic

challenges and, with the help of expert advisors who have clearly understood these challenges, to provide additional insight and guidance on asset classes appropriate for the times. That said, John Budden and I felt an obligation to pass on, if not general market insights, then certainly Kondratieff Winter–specific insights as well as gleanings from our personal experiences that may benefit the reader. Whether or not the experts want to call it a depression, we are thoroughly into the Kondratieff Winter, the beginning of which was signalled by the crash of the dot-com bubble and 9/11. Rising markets gave us a respite, but even the dot-com survivors were not prepared for 2008. Now, novice or veteran, investors must be steeled for whatever else may arrive. Here's a framework from which to start.

1. Prepare Yourself Psychologically

a. *First, if you lost money in the markets, realize you are in distinguished company*. In 1720, British physicist Sir Isaac Newton, having garnered a 100 percent profit of £7,000 from his shares in the South Sea Company, jumped back into the market at a much higher price and proceeded to lose £20,000, the equivalent of $3,000,000 today. American economist Irving Fisher lost most of his wealth in the 1929 stock market crash, while, in 1937, John Maynard Keynes lost two thirds of his[2] only to bounce back to become, during his twenty-two-year tenure as bursar of King's College, one of the greatest investors of all time, on a par with – if not better than – Warren Buffett. Benjamin Graham lost 70 percent during the 1929 to 1933 crash and went on to become an advisor and educator par excellence to millions of investors, including Buffett. Notably, Keynes, like Buffett, avoided diversification believing instead that "the right method in investment is to put fairly large sums into enterprises one thinks one knows something about."[3]

b. *Know yourself; think for yourself*. The great investment minds, from Canada's Stephen A. Yarislowsky to Rees-Mogg and Davidson to Graham, all insist that this is job one. This is not, however, inconsistent with obtaining advice or signing on with an independent fund manager, institutional brokerage firm, or fee-for-service financial planner, but in order to fully benefit from advice, some preparation is necessary. You must know first what your needs and goals are. In this regard, consultation with a fee-for-service financial planner is a good first step. He/she will help you sort through your assets and liabilities and will provide advice about how these should be deployed without trying to sell you anything.

With a financial plan and a basic understanding of the macro investment climate in hand, your homework should also include a rudimentary understanding of analytical investment tools such as fundamental (how healthy is the company), technical (what are its movements in the market), and cyclical (does the stock advance or decline, for instance, within recognizable patterns?). You can then seek out a broker or fund manager-advisor who is in sync with your outlook and temperament, and who will hopefully bring a stunning knowledge of stocks and investment products suited to your criteria.

It is important to remember that all money managers have a vested interest in making you believe that the market will always go up. So long as they have your funds under their control, they will make money through interest and/or commissions whether you are in cash or invested. While, historically, the market has always gone up, it also has made some huge spikes downwards and, in the case of Japan, extended, grinding slides to the downside over a considerable period of time. Today, market volatility is also a big challenge. All these challenges can be hugely costly to a portfolio. Indeed, legendary investors like Marc Faber see wealth reductions of as much as 50 percent, which, if this hasn't happened to you via stock market or real estate losses, could well happen over the next few years, no matter where you live. John Budden agrees. The liquidity infusion that drove the markets up from their 2008 lows operates on the basis of diminishing returns; if this is the sole impetus for upward market movement, we can expect lower highs with one or more Black Swans or Worsening Case Scenarios taking the markets to an eventual bottom. Money can be made in such markets, but the investor/manager has to have a plan for dealing with it.

A dizzying array of online information and discount brokerage firms makes it possible to manage your portfolio yourself. Digitization and the wide availability of online accounts, advisors, and chatrooms have democratized investing in a way barely imagined as recently as the 1960s when "white shoe" (the term refers to the white buckskin shoes long popular in Ivy League colleges that produced the "WASP" elite who ran Fortune 500 companies) firms like JP Morgan vetted you before you set foot in the door of their plush carpeted suites. If you decide to go this route, prepare for a significant investment of time to learn the rudiments, and understand the ease with which it is possible to be impulsive and emotional, problems a broker can mitigate or filter for

you. Most discount brokerages supply investment guidance and stock evaluations. In any case, if you are a novice, under no circumstances should you attempt online investment without professional guidance. Such services exist for a fee and are a solid investment from which you will ultimately benefit. Free online guidance is also available, though you must be discriminating about such services. If you are currently with an institutional broker, be aware that weeks, or even a month or more, not days, may be involved in transferring to an online account.

Many portfolio advisors, including many of John's friends who have been interviewed for *The Dog Bone Portfolio*, publish newsletters that are excellent both as learning and investment tools. Even so, and if you haven't already learned this lesson, bear in mind that …

c. *Everyone learns the hard way*. For those of us who have incurred significant market losses, we don't need psychologists to tell us that the "pain of financial loss is more than twice as intense as the pleasure of an equivalent gain."[4] In fact, having lost money, many of us sell out at the bottom and refuse to get back in! That said, it is best to …

d. *Avoid losses*. This is paramount. Huge losses in a portfolio are destructive. Even in stable, rising markets, they require many years and percentage gains far in excess of percentage losses in order to recoup capital, much less make a profit. And, if you actually do sell at the bottom, you not only lock in losses but you aren't there when the recovery gets under way. Worse, you will have less money with which to buy back shares of your favourite stocks, so you will end up with far fewer of them.

There will always be occasions when it makes sense to cut your losses, but the cardinal rule of experienced investors is to sell into rising markets and to buy in declining ones. In the words of Baron Rothschild, who made a fortune in the panic following Napoleon's defeat at Waterloo, "The time to buy is when there's blood in the streets, even if it is your own."[5] That said, the liquidity that drove the gains of stock markets following 2008 was the exception, not the rule; many who stayed in and recouped to May 2011 are finding it harder to avoid losses in 2012 and 2013. So 2008, like the dot-com crash, could prove to have been essential training as the next drop in the markets could be lower than 2008. (See Dow 1000 in appendix A.)

e. *Buy low, sell high*. The best protection against loss of capital is to buy low in the first place. Increasingly, this no longer means "buying the dips," but buying at support levels and only when those support levels have been

tested a few times and a solid base has formed. If you buy at a sufficiently low price, riding out the volatility that may afflict even the most solid companies becomes much easier. This is why old-timers, and experts like Benjamin Graham, warn against "trading" and trying to "time" the market and why gold bugs, many of whom have been in gold since 2000 or earlier, can be casual about the metal's volatility today. Either way, be aware that current market volatility will challenge even the most tried-and-true methodology, and have a plan or structure for dealing with it. Legendary Dow theorist Richard Russell recommends having an exit strategy, such as selling stocks that decline 8 percent or more from their peak price. "The unforgivable mistake occurs when an investor rides his stocks down during a vicious correction or a bear market – all this because the stubborn investor has no planned exit strategy."[6]

Be particularly vigilant when upswings reach resistant levels; in the Kondratieff Winter's skittish markets, a sell-off often follows. At such levels, taking profits or using a stop-loss can protect your gains. Accepted wisdom holds that, so long as the stock's movement remains within its trading channel, whether it is up or down it will probably continue in that direction. One or two tests may then take place; if resistance/support is breached, continuation of the stock price in that direction is reasonably assured. Even so, bear in mind that …

f. *Fundamental, seasonal, and technical analyses all succumb to macro factors*, and even a stop-loss order may fail in a panic-stricken waterfall market event; in order to sell, you need someone to buy. During waterfall events, the buyers disappear or cannot act quickly enough to buy. Stocks with good fundamentals have a good chance of rebounding eventually, but eventually could be a very long time.

g. *If you buy gold, be aware* that prices for gold mining shares and bullion behave differently. Avoid gold ETFs that do not have sufficient gold to back up the claims on them. (See Appendix B: Gold.)

h. *Harness your emotions*. Don't be afraid of your emotions; use them. We live in a time when the psychology and, now, the investment industry would sanitize our emotions out of existence. Fortunately, long before the psychology industry came along, the bad emotions like Lust, Gluttony, Sloth, and the one that really distorts the stock market, Greed, were identified and received the drubbing they deserved. But the fact is, most emotions, including the so-called negative ones, serve important functions. Feelings of fear, guilt, and shame alert us to situations and

behaviours that are potentially harmful, either to ourselves or to others. Fear of heights keeps us away from the edge of cliffs. Feeling guilty means we are less likely to err again. Grief allows us to honour both our sense of loss and the deep bond we had with someone who passed away and, yes, even stock market losses. Such matters speak to our essential humanity and should not be dismissed or minimized.

The problem, then, is not emotions per se but the possibility they may overwhelm us and cause us to act irrationally and to make poor decisions. In this context, we say the person is being "emotional," yet, on closer inspection, the only thing that distinguishes the "emotional" person from the "unemotional" one is likely not emotion at all but experience. The "unemotional" person has learned how to identify and then manage or, better still, to channel their feelings to constructive purposes, including into the higher realm of the intuitive. By taking their arousal (emotional) levels and combining them with knowledge and skill, they are able to deliver the right decision or performance at the right time. Great performers all seem to have this ability, whether in the area of sports, the arts, medicine, management, or investment.

How do the rest of us acquire this state? There are no shortcuts. It takes time, learning the ropes, practice, and making mistakes. It takes what Malcolm Gladwell[7] identified as the ten thousand hours needed to master a skill. It takes a lot of "woulda-coulda-shoulda's" because, without acknowledging these, you aren't learning from your mistakes and, most of all, you need to learn. It means, if necessary, locking yourself into a disciplined plan or structure to do the job for you. Technical analysis, particularly, is a valuable tool for channeling your emotions into constructive action. It means, as it did in my case, turning your instinct for selling at the bottom into calling the bottom. It also means getting help, which is where a good advisor comes in.

Some basic steps for selecting an advisor are indicated above, but cautions are in order:

i. *Beware the Pied Piper*. Financial advisors and brokers are, first and foremost, salespeople, who generally earn a living from commissions on your business. Unlike financial planners, who charge a fee for offering advice that you may accept or decline, the broker, fund manager, or advisor's primary objective is to get and keep your business by offering one or more products. The vast majority conduct themselves lawfully and with propriety. Bernie Madoff didn't. Defrauding investors of some $50

billion, Madoff perpetrated the largest Ponzi[8] scheme in history. How did he do it? According to Diana B. Henriques,[9] author of *The Wizard of Lies*, it was not by being charismatic, hail-fellow-well-met, promising you the moon, or by being particularly charming, though these are often trademark behaviours of such con-artists. To the contrary, his primary tactic and "fatal gift" was to make you feel you were the most impressive person he had ever met, particularly by virtue of being so smart as to invest with him! As an added benefit, he didn't promise to make you rich, only that he would deliver modest but steady returns. Any questions or attempts at due diligence by the prospective investor were waved away with indifference. What did it matter to him if you did not invest? After all, his was an exclusive club! By making investors feel that not just anyone got into his fund, he made them try even harder for admission.

Henriques concludes that, because Ponzis are so good at appealing to people's vanity and creating trust, Ponzi schemes will exist in good times and bad (though it is in the bad times when Ponzis tend to be exposed, because that's when their assets dry up). Moreover, given Madoff's spectacular, if ultimately doomed, success, even more Ponzis will be using and adapting his techniques.

Though most of us are unlikely to be a victim of a Madoff-style scam, it supplies important lessons for everyone because the tools he used, in minor or major ways, are often used even by reputable managers. Flattery and name-dropping are standard sales techniques. That somebody famous is involved with a fund or particular broker is no substitute for due diligence around any undertaking, much less financial. And though it would appear that Mr. Madoff was an equal-opportunity type of individual, women particularly may want to take note of such tactics. As the Kondratieff Winter wreaks its worst on the male workforce and women, in any case, win out in the longevity stakes, a whole generation of boomer women are changing the investment landscape – though it hardly promises to be a feminist nirvana. Many will have no experience or knowledge of the field. More worrying, many will also be widowed or divorced and possibly of a "certain age" and thus in the centre of a perfect storm of vulnerability. On top of emotional stress and financial ignorance, they will have to navigate a field dominated by very experienced brokers, not only in financial terms but also in psychological and sexual terms. According to one infidelity website owner, who has a subscriber base of 9.2 million in fourteen countries, "almost a third are

in the financial industry."[10] While his clients tend to be younger, sexually frustrated family men seeking a non-committal outlet, no woman should underestimate the skills of an aging alpha male intent on landing or keeping yet one more account. And should he succeed in winning you over to his good graces, don't assume this will help you when trouble hits. Like all Madoff's victims, his mistress Sheryl Weinstein[11] lost her personal investments as well as the investment funds she managed for a charitable organization.

In this light, any personal overture should automatically raise flags that both your emotional and financial health could be in danger, not just because your broker or advisor may be dishonest or manipulative, but because your own judgment may be impaired.

By far and away, however, the vast majority of advisors, fund managers, and broker dealers want nothing more than to see their clients do well. You can help them by being prepared, asking clear questions, and insisting on clear answers. Like its relationship to due diligence, trust is no substitute for good communications rendered in the context of a professional relationship. After that, let portfolio performance be your sole basis for a continuing association.

j. *Create your own hedge fund*. Wherever you find yourself spending a lot of money, buy the stock to offset its cost. For coffee drinkers, John reports that lattes – "fancy pants drinks" – will increase business by over 30 percent.[12]

2. Other Practical Steps for Weathering the Kondratieff Winter

a. *Read The Dog Bone Portfolio's key references*. The works of Brian J. L. Berry are key to understanding the fundamentals of long-wave theory; William Rees-Mogg and James Dale Davidson flesh out its significance for investors. Everything they described in *The Great Reckoning* in 1993 arrived in 2008. Additionally, their first book, *Blood in the Streets*, contains a valuable section on trading financial assets and a glossary of technical terms. (*Chasing Goldman Sachs* by Suzanne McGee also provides an excellent glossary of more contemporary terms.) While many books offer prescriptions for managing financial assets during depressionary times, the Rees-Mogg/Davidson prescriptions are comprehensive and reasonable and provide unparalleled context and analysis, which, with minor exceptions, are still relevant today. My public library in Ottawa offered several copies of both *The Great Reckoning* and *The Sovereign*

Individual, but I had to buy *Blood in the Streets* online. Rees-Mogg's *The Reigning Error* and Professor Berry's books are also available in university libraries, as are Nikolai Kondratieff's complete works published by Chatto & Wyndam.

Highlights from *The Great Reckoning* on how to prepare for crisis include the need to build a cash position equal to one year's expenses, placing your business on a sound footing, accelerating income, and selling your home if your equity is less than 50 percent and/or it represents more than 50 percent of your total assets. Anticipating our dog bone theme, it recommends you diversify outside the country if you have more than $250,000 (that's 1993 dollars, so this number should be adjusted for inflation) in assets, particularly if you live in the United States. Buy-and-hold will be unprofitable; the test of how low markets can go in Europe and the U.S. is how low the markets dropped in Japan in its Lost Decades (note: dividend yields may not compensate for capital losses in this eventuality); expect a "Drunken M" pattern in the stock markets – boom (peak 2007), panic (2008–9), rally (2012–3), decline (2014/15?) – and volatility in the bond market; buy some gold; expect many false dawns; and don't be misled by reports of recovery before the bad debts have been faced.[13]

I would add that chief economists of institutional brokerages and investment banks, as well as mainstream media, provide factually correct information but have a bias towards supporting overly optimistic central bank and government messaging and, responsibly, do not want to trigger panic. Their reports must therefore be balanced with reputable independent sources such as those featured in this book. Reputable sources are key here, as information randomly accessed from the internet may not be factually correct.

b. While our Dog Bone advisors use K-wave analysis as one among many tools, we are aware of only *two active investment advisories that premise their full-time analysis on Kondratieff long-wave theory*. The first is Ian Gordon's Longwave Group, the use of whose several excellent charts – including the Kondratieff Long-Wave Cycle and Lifetime Economic, Financial, and Investment Map – in this book is gratefully acknowledged.

Bob Bronson, at Bronson Capital Markets, who first assigned seasonal descriptions to different parts of the K-cycle, provides an e-mail advisory service and contributes analysis to the website Financial Sense. His models[14] combine Kitchin political/stock cycles, the Juglar business

cycle, and the Kuznets residential housing cycle, all of which nest like Russian dolls within the Kondratieff cycle. In 2008, Bronson identified the Kondratieff cycle as being in its deflationary economic phase with declining interest rates and declining rates of inflation (disinflation) eventually becoming outright deflation, especially debt deflation, before its end in 2014/15. From the trough of the Kondratieff Winter and entry into a Supercycle Spring, Bronson sees the markets tripling every eight years, or doubling every five, to reach highs of 50,000 to 100,000 on the Dow by 2030.

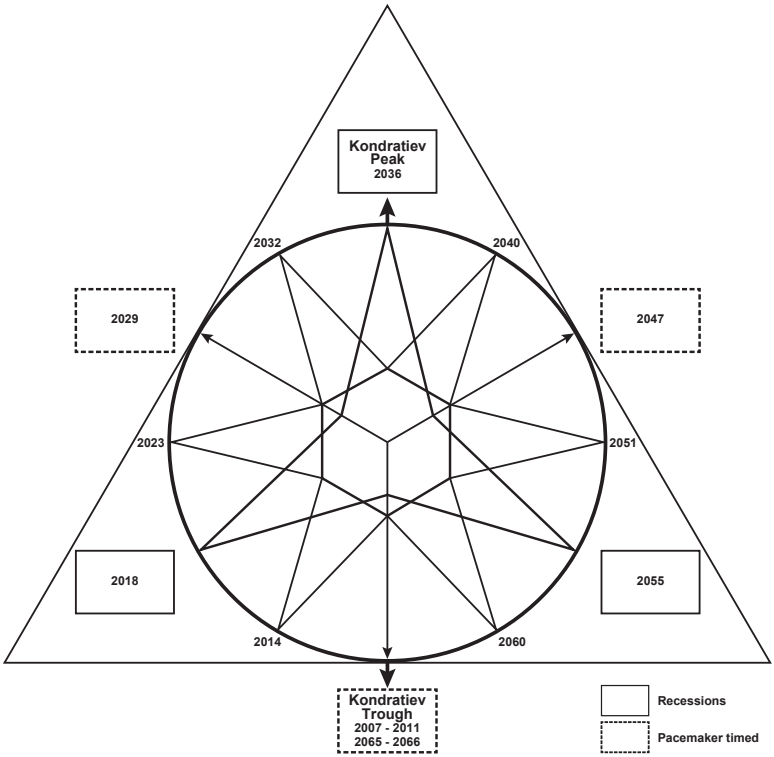
Another prominent analyst who references or otherwise builds on K-wave theory to offer investment advice is Elliott Wave practitioner Robert Prechter. Demographer H. S. Dent (*The Coming Depression*) and Neil Howe (*The Fourth Turning*) also assign seasons to the cycles they identify, though without referencing Kondratieff, and only Dent gives investment advice. He also sees a major downturn ahead for the markets.

On the subject of investing in the Kondratieff Winter, the last word goes to Dean LeBaron, who, in an email exchange with John Budden and me on March 20, 2015, explained the role of contrarians in the Kondratieff Winter. "Successful contrarians ask the questions unasked by others," he wrote. "They see the world through a different prism than others and arrive at answers which are unique to them … and they expect returns to be superior to those that must be divided among the many holding a consensus portfolio of ideas.

"The turbulence and confusion of a Kondratieff Winter is their time. While others, especially those who were most successful in the K-wave Summer and Fall have excessive confidence in their well-documented wit, twist and turn losing money as each fad disappoints, the intellectual Kondratian adopts the Buddha-like quiet posture of letting the world open in new places."

Now that you have read *The Dog Bone Portfolio*, you will find many instances in which Nikolai Kondratieff's theories and ideas have permeated analysis and commentary, often with the analysts and commentators being unaware of this themselves.

Finally, here are Professor Berry's key dates in the next and fifth Kondratieff long-wave clock.[15]


Kondratiev
Peak
2036
2032
2040
2029
2047
2023
2051
2018
2055
2014
2060
Kondratiev
Trough
2007 - 2011
2065 - 2066
Recessions
Pacemaker timed

Good luck!

APPENDIX E

John Budden's Dog Bone Portfolio

Never invest in a business you cannot understand.

–WARREN BUFFETT

Your Dog Bone Portfolio should preserve wealth and maintain purchasing power through the current Kondratieff Winter, when social turbulence and financial volatility unlike any encountered in the last eighty-five years is possible. And, yes, it will probably be very different this time around.

Our experienced investment friends have suggested strategies and ingredients for our Dog Bone Portfolio (see chapter eight), and now the challenge will be to select and blend holdings to meet our personal and family objectives. The goal is not only to weather the current countervailing inflationary and deflationary forces but also to survive and thrive through competitive devaluations and the resulting inflation that will eventually savage your purchasing power.

Portfolio weightings are dependent on one's time horizon, life philosophy, geographical location, personal risk tolerances, and income requirements. A key determinant of your success will be your ability to adopt a contrarian stance, and that requires courage, patience, and the willingness to accept emotional stress. In these markets, you can't wear your heart on your sleeve.

I talk about financial scar tissue from experience. A physical scar provides a visual reminder of an injury or major operation. Most of us through the course of our lives have earned some painful financial scars as a result of investment mistakes. In an era of global quantitative easing, zero interest rates, and stock markets that have been the recipients of hot and leveraged money, securities should be selected with advice from a qualified registered investment advisor, not all of whom are created equal.

Consequently, in selecting a financial advisor, note that the Chartered Financial Analyst designation is a good though not a mandatory professional

qualifier. Your advisor must have a real understanding of the art and science of sound investing, along with that quotient of investing scar tissue. All that being said, there is no easy solution and you must take charge proactively of your financial destiny and learn to make personal executive decisions about your choice of advisors and selection of investments. And remember to visit DogBonePortfolio.com to participate in an ongoing global exchange of ideas that will make this a truly living book and forum where you can discuss your theories and source answers to your investment questions as well as check in on updated interviews with our wise investment friends.

The following is a representative Dog Bone Portfolio from a Canadian perspective, because I live and work in Canada. Naturally, your own Dog Bone Portfolio will be influenced by your country of residence and your personal philosophy and investment objectives…

5% ~ Cash: Canadian and U.S. Dollars

0% ~ Bonds: Jim Grant, publisher and editor of *Grant's Interest Rate Observer*, describes government bonds as "return-free risk."

25% ~ Canadian Stocks (all listed on the TSX)

Canadian Chartered Banks: Royal Bank of Canada (RY), Toronto Dominion Bank (TD)

Railways: Canadian National Railway (CNR)

Oil and Gas: Imperial Oil (IMO)

Pipelines: Inter Pipeline (IPL)

Communications: BCE Inc. (BCE)

Intelligent Information: Thomson Reuters (TRI)

Merchandiser: Loblaw Companies (L)

Agriculture: Agrium (AGU)

Precious Metals: Franco-Nevada Corporation (FNV), BitGold (XAU)

Investment Management: Sprott Inc. (SII)

15% ~ U.S. Stocks

Health care: Johnson & Johnson (JNJ) (listed on the NYSE)

Technology: Apple (AAPL), Google (GOOG), Tesla Motors (TSLA), Netflix (NFLX) (all listed on NASDAQ)

5% ~ Global

Food and water: Nestlé (NSRGY) (listed OTC)

50% ~ Precious Metals (cash alternative and inflation, deflation, and devaluation insurance)

(25%) Royal Canadian Mint Gold Reserves: Exchange Traded Receipts (listed on TSX – MNT), Sprott Physical Gold Trust (listed on NYSE Acra – PHYS and TSX -PHY.U)

(5%) Royal Canadian Mint Silver Reserves: Exchange Traded Receipts (listed on TSX – MNS), Sprott Physical Silver Trust (listed on NYSE Acra – PSLV and TSX – PHS.U)

(5%) Sprott Physical Platinum & Palladium Trust (listed on NYSE Acra – SPPP and TSX – PPT.U)

(10%) Sprott Gold Miners ETF (listed on NYSE Acra – SGDM)

(5%) Sprott Gold Miners Junior ETF (listed on the NYSE – SGDJ)

John Budden
May 2015

APPENDIX F

Requiem for a System Leader

It was January 28, 2014, and some five years had passed since, from the serenity of the grey-green room, I watched former President George W. Bush raise the markets and a nation's spirits. A lifetime of financial learning had been crowded into those five years, but this particular day would find me preoccupied with the under-the-cupboard halogen lights in my salsa-coloured kitchen. Yet again a tiny bulb needed changing, though how I should do this without using, as directed, my bare fingers, defied common sense. Where was the Kondratieff Spring when you needed it? Until innovations like this were properly innovated, I momentously concluded, I would revert to my trusty fluorescent lighting.

Innovation was also on President Obama's mind that evening when he acknowledged how a "nation that goes all-in on innovation today will own the global economy tomorrow."[1] He was thinking of tomorrow's equivalents of Google and smartphones, not my halogen lighting. He probably wasn't aware either that it isn't the nation that innovates that would own the global economy but the nation that creates production capacity and wealth from those innovations. Five years following the biggest economic crisis since the Great Depression, that nation appeared to be China, not the United States.

It was one of many clouds suspended over a State of the Union speech that President Obama, as the nation's latest booster-in-chief, couldn't dispel, though not for the lack of trying. Brightly jacketed congresswomen, forced smiles, and hail-fellow handshakes forming the presidential gauntlet were testament enough to a skilfully stage-managed event. And the man whose profound gift of the gab so impressed an identity-obsessed society but who now seemed oddly in over his head delivered a competent enough speech. "And here are the results of your efforts," he told the joint session of the United States Congress in the chamber of the House of Representatives.

> The lowest unemployment rate in over five years; a rebounding housing market; a manufacturing sector that's adding jobs for the first time since the 1990s … more oil produced at home than we buy from the rest of the world, the first time that's happened in nearly twenty years – our deficits cut by more than half; and for the first time …. in over a decade, business leaders around the world have declared that China is no longer the world's number one place to invest; America is.[2]

Measured against the challenges that remained, however, the litany of accomplishments paled in significance. The unemployment rate was down but the labour participation rate was off the charts. Millions of discouraged American workers simply disappeared from the statistics and where reshoring of jobs had taken place, many – including those at Apple's new Mac Pro facility in Austin, Texas – were going to robots. Ready or not, Kondratieff's requirement for a change in production relations was under way, but unlike Ford's assembly line which had empowered American workers, robots and other new technologies would render them redundant, white collar workers included, never mind how jobs were the only answer to the problem of unequal incomes and the disappearing middle classes. This paradigm shift – akin to the movement from the agricultural to the industrial era – was catching every country and every economy unprepared, all but assuring that the backlash to joblessness, immigration, and globalization under way in Europe where anti-EU parties gained prominence in its parliamentary elections would soon arrive in other countries, too.

To be sure, the housing market was off the floor, but billions in mortgaged-backed securities soaked up in Federal Reserve balance sheets meant it was once again being artificially sustained as defaulted mortgages were permanently monetized. And yes, the shale boom helped stabilize America's manufacturing base and current account balances, even as the IEA confirmed the one-and-a-half-dollar expenditure needed for a one dollar return in shale oil and estimates of California's recoverable Monterey shale deposits, two thirds of the nation's shale deposits, were cut by 96 percent. But it helped, as did the tremendous progress in solar installations, though here again it had to be said that China was leading the solar race as Hanergy, China's controversial thin-film solar power company with a market cap of over $270 billion – more than all other Chinese solar panel manufacturers combined and far greater than U.S.-based First Solar Inc. – announced windfall profits in March of 2015. For smog-choked China, this would be an energy game changer, as

would its leadership in the use of thorium nuclear power and a favourable deal for gas supplies from Russia. Where energy diversification and security were concerned, authoritarian capitalism was winning hands down over democratic capitalism which, in North America, remained mired in controversy and failure to agree even about expanding its well-entrenched pipeline systems. Indeed, more than a "win," this was a "win-win" for China as its move to an inexpensive and diversified energy pool provided the perfect setting for creating those genuinely transformational Kondratieff "technics" so necessary to the surging of the long-wave cycle, though time would tell what kind of role India might play. Here, the savvy leadership of the newly elected Narendra Modi, healthy demographics, and the need for endless amounts of infrastructure and urban development suggested a future of spectacular growth. And who could fail to notice the contrast between a culture hynoptized by offerings like the morally ambivalent *Breaking Bad* or *House of Cards* with one characterized by Bollywood? Nineteen-fifties America and its cultural shrine, Hollywood, was in its heyday. Now that day had arrived in India.

America the number-one place to invest? Following a two-day sell-off in global and equity currency markets that had taken place on January 23 and 24 of 2014, the president could speak of America's renewed investment prospects if only because emerging markets were suffering a liquidity crisis caused by the Fed's tapering and the threat of higher interest rates that could again, as in the past, tank emerging market economies. As usual, the better-managed economies would weather the storm, but this time even the highly regarded former IMF chief economist Raghuram Rajan, now Governor of the Reserve Bank of India, complained of the absence of coordination in central bank policy. Managing the world's reserve currency meant the Fed was also the world's de facto central bank, so this reshoring of capital flows seemed callous at best, never mind the boom and bust cycles, along with a soaring dollar, it induced. The bazookanomics that so helpfully liquified the markets through 2011 and 2012 were at an end. Now, and with the M1 money multiplier languishing at a new low of 0.69, it was every currency for itself. Even the German Bundesbank, in a radical concession to ECB liquidity requirements, seemed prepared to open the door to quantitative easing, which, in 2015, it did.

And was I the only one thinking that the negotiations with Iran around the development of a nuclear fuel were a last ditch attempt to save the petrodollar? After all, end runs around its use among certain BRIC and Arab countries were well under way. As if to retaliate, the U.S. entrenched the dollar

swap arrangements used by the Fed, the ECB, and the central banks of Canada, the United Kingdom, Switzerland, and Japan during the financial crisis, thus assuring them, and itself, of favoured nation status. It also refused the IMF additional funding that would assist emerging nations' participation, perhaps in the hope that this might impede their progress, even as John Budden informed his listeners of Toronto and Vancouver's bid, with approval from Canada's federal government, to become North America's major settlement centre for the yuan (or renminbi, as the Chinese currency is also known), to help enhance trade and reduce currency costs between the two countries. Even so, who could know the lengths to which the U.S. might go to preserve the dollar's reserve currency status? Was this just the beginning?

But the cloud – some would say elephant – slumping most indecorously over the President's State of the Union address on the evening of January 28, 2014, was debt. As recently as September 2013, William White, a former chief economist of the Bank for International Settlements and now with the OECD, had warned we were looking at 2007 all over again but this time even worse, and that we were running out of lifelines. "All the previous imbalances are still there," he told Ambrose Evans-Pritchard of *The Telegraph*. "Total public and private debt levels are 30pc higher as a share of GDP in the advanced economies than they were then and we have added a whole new problem with bubbles in emerging markets that are ending in a boom-bust cycle … The ultimate driver for the whole world is the U.S. interest rate and as this goes up there will be fall-out for everybody. The trigger could be Fed tapering but there are a lot of things that can go wrong. I am very worried that Abenomics could go awry in Japan, and Europe remains exceedingly vulnerable to outside shocks."[3] Mercifully and perhaps because he was a Canadian, he didn't mention how Canada led the world in house-price-to-rent ratios and was second only to Belgium in house-price-to-income ratios, suggesting house price overvaluations as high as 60 percent.

A few months later, in December, the Bank of England's new governor, Mark Carney, told PBS's Charlie Rose he was worried about possible crises arising from shadow banking systems, no doubt China's, though had he looked closer to home, he might have noticed another crisis brewing across the Channel – this time a trough war in Ukraine. Russia, a newly stronger nation that had already outpunched the newly weaker United States in Syria, was now punching again. K-wave scholar Cesare Marchetti's "pub" theory of history was being re-enacted as the one-time bread-basket of Europe – now beleaguered, bankrupted by its politicians and oligarchs, and itself on

the verge of default but with a resource-hungry China eyeing its agrarian heartland – became the nexus of a global clash of interests that had all the makings of a global conflagration, if not sooner, then later. With U.S. Senate Bill S.2277 outlining plans for NATO that essentially militarized the Baltic states and Ukraine, something had to give. Putin, mobilizing his own version of asymmetric warfare, snatched Crimea, sent agitators into eastern Ukraine, and placed troops along its borders while the U.S. and the EU mobilized their sanctions, which, if used to prevent Russian banks access to the markets as it did in Iran, could also compromise the German and East European economies to which Russia was linked through their banking systems. Ominously, this scenario, if enacted, had the potential to cripple not only Russia but finally to trigger the Credit-Anstalt moment that had been so long delayed with all it meant for Deutsche Bank's $75 trillion in derivatives, the global banking system, and its final plunge into a deep depression, never mind Russia's cyber warfare and nuclear first-strike capabilities.

Tragically for Russia, Putin would apparently give little consideration to its greatest economist, Nikolai Kondratieff. The latter's long-cycle theories, with their emphasis on savings, low commodity prices, the need to leave legacy industries behind, and gold sufficient to establish backing for a failing ruble, would enable the restoration of Russia's vast human and resource potential to a respected place in the global economy, a position it already partially commanded through the richness of its religious and cultural history, and where it could lead by example rather than by force or cunning.

And the great reflation that should have seeded the Kondratieff Spring elsewhere was instead turning into a Hail Mary pass – a desperate move by the central banks to fill the deflationary void that threatened yet more debt and the prospect of another market collapse worse than 1987, 2000, and 2008 combined. J.C. Penney, Best Buy, and Sears, bellwether retail outlets forced into restructuring to meet the challenge of online shopping, were barely holding their own as corporations everywhere focused on dividend payments, share buy-backs, and mergers to keep investors appeased, avoid new capital investments, and buy time until global risks abated and basket case governments got their act together. Economists and industry leaders alike predicted that would not happen until at least 2020, while some technicians saw a market collapse with a bottom arriving only in 2017. Ben Bernanke, the retiring chairman of the Federal Reserve who had saved the world from certain economic collapse in 2008, was passing the baton to a Janet Yellen now facing another possible collapse.

Little wonder, then, that a pall settled over the blogosphere or that Dean LeBaron told the *Wall Street Journal* he had no investments in the U.S. stock market and that whatever investors were doing now would be wrong in the future. "In a transition phase, you do as little as possible because you cannot forecast with the tools of the past what will be the tools of the future," he cautioned John Budden's listeners in May 2014. Gold and silver may not make you money but they will protect you, he advised. "Get very concerned about bubbles. In the United States private equity, which has been so popular for fifteen years, has now been made available for small investors. Woe betide, beware small investors, you are about to be fleeced."[4] Similarly, and in an e-mail note to Dean LeBaron, family, and friends, Budden cautioned:

> The stock market is reminiscent of 1999–2000 and 2007–2008 and a few periods that only you and I can remember – 1968–69, 1972–73, 1987. This time round, the stock market is an alternative currency, in a stealth and (not-so-stealth) competitive devaluation world, with interest rates nailed down at abnormally low levels to keep the party going (and) facilitated by Central and Investment Bank co-operation and manipulation. This is a Chinook in Kondratieff Winter but "March will come in like a Lion" and who knows when?[5]

The combined voices of the uber-bears and on-line guerrilla technicians – who factored into their strategies the stock market and gold manipulations now being openly discussed – struck a particularly dread note as their dark predictions became even more plausible. The banks were dangerous places for your money and it was time to load up on gold, they said. Wealth was being stripped away, whether in the form of home equity, jobs, or bail-ins that turned your deposit into an unsecured loan to a bank. Pensions and savings would be first in line. The only question was whether or not the final act in this Kondratieff Winter, The Great Reset, would arrive in time to prevent or at least redress such a calamity, but the spectacle-by-stealth it implied was sad to behold.

According to one version of the Great Reset theory, Western gold reserves, as Eric Sprott had surmised, were indeed depleted. And, as he had also surmised, the U.S. had no choice but to default on its debt. This, and the debt restructuring that would necessarily follow, was in progress early in 2013 but probably no later than October from which time the U.S. Debt Ceiling hadn't been and wouldn't be much of an issue. Though the largest holder of U.S. debt is the Federal Reserve, the second largest is China. How do you prevent China from dumping its U.S. dollars and cashing in its bonds, all but assuring global

economic collapse? Perhaps the availability of a cheap source of gold might do the trick, particularly if the price of that gold would rise at some unspecified (or, perhaps, agreed) time in the future.

If this theory held any water, Americans needn't fear confiscation of their small gold holdings. The important transfer had been readily facilitated via the markets, particularly during the Gold Smash of April 2013 and other such events, when gold was easily extracted from so-called (and thoroughly bludgeoned) "weak hands" by low prices, while the gold held by their government was conveniently made available to bullion banks. The government's ability to invoke *force majeure* – despite the price-fixing investigations under way by both British and German financial markets regulators – provided ample cover for any manner of price manipulation and paper trading, though of course a few billion in fines would be a small price to pay should they be necessary. No less an institution than JP Morgan Chase & Co. had been seconded to oversee the transaction. Why JP Morgan? At the behest of the Federal Reserve in early 2008, so the theory goes and, like its namesake during the Panic of 1907 when John Pierpont Morgan reached into his own pocket to help liquefy a crisis-stricken banking system, JP Morgan Chase & Co. had taken over the bankrupted Bear Sterns in return for acquiring carte blanche trading rights in the precious metals space. It was certainly an appropriate choice. As J.P. himself had famously observed, "Gold is money. That's it."

Whatever the reason, JP Morgan Chase & Co. have clearly been at the centre of gold transactions, if not with the Chinese then with some major player, as record-breaking withdrawals from its gold vaults have taken place even as it owned some $65 billion (or 60 percent of the total) notional gold derivatives (contracts or strategies that manage risk or enhance profit in gold trades). In addition, its premises, Chase Manhattan Plaza, located opposite the New York Federal Reserve building and replete with America's largest private gold vaults, had been purchased (some say seized as collateral) for a paltry $175 million – one of several "trophy" transactions taking place by the Chinese in America and Canada, including a stake in midtown Manhattan's historic General Motors Building, among other "hard" assets. This, in addition to having purchased, for $2.1 billion in 2012, the London Metals Exchange. By 2014, China, where gold vault storage facilities were proliferating, had become the world's largest consumer of gold, overtaking even India.

In the meantime, the theory continues, negotiations were under way to establish the next reserve currency. Likely a form of the IMF's special drawing rights (SDRs), this would allow the dollar to remain in use – one version, say, for

international trading purposes but controlled by the IMF and China, the other for domestic purposes. Alternatively, the SDR may function on its own, backed by European, American, and Chinese gold, perhaps even as a gold-backed, government-authorized digital currency that would be an improvement on the faltering bitcoin experiment, now one of eighty-three crypto currencies in the market place whose Japanese-based Mt. Gox, the second biggest bitcoin exchange in the world, had declared bankruptcy. The catalyst may be a dollar crisis of the kind described in earlier *Dog Bone* pages, or it may take place at a Bretton Woods type of conference, or it may simply arrive via a press conference held by IMF chief Christine Lagarde on a lazy weekend. Or the next reserve currency could arrive as none of the above. With the BRICS' New Development Bank (NDB) and the Asian Infrastructure Development Bank now de facto rivals to the World Bank and the IMF, the NDB could easily develop its own gold-backed SDR to rival anything created by the IMF. Whatever its method of delivery, over the next several years Americans would face price increases of 30 to 50 percent, an amount that would inflate away any government debt remaining after it had been repriced in gold but leave individual Americans commensurately poorer. A gold-backed global reserve currency means the American government would, however, save face – a protocol the Chinese understand very well.

With the United States having endured its Suez "moment" in the most civilized way possible, this Great Reset would be completed with a rise in the price of gold. Thus the Chinese, with gold holdings made so readily available at such attractive prices, will have been compensated for their losses in American debt holdings (and shadow banking system), as will the U.S. Treasury with its remaining gold holdings. For those investors who resisted the ranks of the weak-handed and kept their gold holdings through steep losses, vindication and huge returns were now possible. Commodity prices, along with the price of gold, were in any case bottoming and would soon become the natural repository of safe haven–seeking wealth as stock markets entered their parabolic phase where, in case there was any lingering doubt, the bank research group, OMFIF, confirmed that central banks, sovereign wealth, and public pension funds, in their own version of authoritarian capitalism, had massively invested to the tune of some $29 trillion! As in the 1970s, however, any rise in commodity prices, along with further increases in asset prices, would, in the absence of real growth in the economy, make stagflation all but inevitable. The trigger this time would again arrive via war and via officialdom – in this case as the European Central Bank Chairman, Mario

Draghi, announced a new round of LTROs and negative interest rates, the first such move by a prominent central bank, followed on January 22, 2015, by an announcement of full-blown QE worth 60 billion euros a month in bond purchases. Anticipating a plunge in the value of their euro holdings, the Swiss National Bank had delinked the Swiss franc from the euro on January 15, 2015. Instantaneously, banks and hedge funds that were on the short side of the Swiss franc lost billions. Few saw any hope that QE, euro-style, would offset the deflationary forces engulfing Europe, a situation made worse by the possibility of Greece's exit from the eurozone as the new Syriza (or the "Go Stuff It" as John Budden dubbed it) Party took power thereby setting a precedent for other Mediterranean countries like Spain, Portugal, and Italy also wishing to repudiate Troika-mandated austerity and debt repayment.

If, in 2009, things looked bad for the eurozone because of Greece, now it looks worse because of Greece, with dire implications for Germany, as well as the Western security system. A "Grexit" would assuredly add to instability in the Balkans where Russia maintained a clear and abiding interest.

Even so, and as Rees-Mogg accurately foresaw in 1974, the centre was holding. Global capital continued its flight to the "safe-haven" that was now the U.S. dollar.

In Iraq, Islamic militancy took asymmetric warfare to the next level and changed the balance of power in the Middle East. No longer a matter of war between nations, radical Islam was on the march in a sectarian war whose path would surely include the West and its values. But even radical Islam would take a back seat to OPEC's momentous decision to maintain high levels of oil production. In a last ditch attempt to maintain market share as the world transitioned to new or homegrown energy sources, the announcement and everything that meant for the price of oil rocked global bourses and sent the Russian ruble into dizzying decline. Geopolitics and monetary policy were now little more than sideshows alongside the Black Swan event John Budden declared had arrived in full force and effect. Peak oil was meeting peak demand giving consuming nations like China and Japan a clear advantage, at least in the short term, while oil-producing nations would be the losers, possibly for the long term. In the U.S. – where the shale gale was the main employment game in town – being priced out of business was a catch-22 for which cheaper energy was hardly compensation, not to mention the effect it would have on those banks propping up an outrageously over-leveraged shale industry. And like the Detroit bankruptcy before it, the OPEC-induced oil-price war would further consign the oil and auto era to the status of an old utility stock, no longer

a major driver of economies but still useful. But perhaps it was about time. An old, Old Economy, older than info-tech, was on its last legs, a harbinger that the next New Economy and a Kondratieff Spring was just around the corner, if only we knew what it was. In his 2015 State of the Union address, President Obama suggested the next New Economy had arrived but somehow failed to define it, though by April 2015, the launch of Tesla's Powerwall battery units, with their potential to transform electrical grid management and how quickly the use of solar power becomes widespread, more than suggested at least one of its components.

Scooping up global energy assets now available at self-induced firesale prices, Saudi Aramco wasn't taking any chances. Its business interests would be assured whichever Economy, Old or New, prevailed.

For its part, the Gold Bull stirred beyond its seasonal parameters on the first sound of war drums, when pro-Russian demonstrations in the Donbass region of Ukraine escalated into armed conflict. Beaten up and beaten down for the better part of three years, it too struggled for rebirth, a prospect made more likely as the Bear stalked overvalued stock markets ever more closely.

For his trouble and despite the interminable litigation woes JP Morgan Chase & Co. was facing, its CEO, Jamie Dimon, was paid $20 million in 2013. This represented a 74 percent increase in his salary. In 2014, the head of the organization that pioneered the use of credit derivatives some twenty years earlier successfully lobbied the House of Representatives to include in its spending package bailout provisions for too-big-too-fail banks at risk from a derivatives' implosion.

To the best of my knowledge, no one thanked or congratulated him.

Margret Kopala
May 2015

Endnotes

Authors' Preface

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without Kondratieff's theories, Schumpeter's development of the concept of creative destruction would not have been possible. Further, we might not have the famous "Minsky Moment," either – a popular concept derived from Minsky's Financial Instability Hypothesis in which he describes the movement of the financial system from stability to fragility and ultimately to crisis. The Minsky Moment is the point at which assets must be sold to finance the losses of over-indebted investors, thus causing market crashes. "Hyman Minsky," *Wikipedia* <http://en.wikipedia.org/wiki/Hyman_Minsky>.

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describes a fifty-four-year cycle. Subsequent to reading Berry on this subject, I discovered that this idea was developed in 1901 by a Basel-trained economist, the Marxist theoretician and Russian revolutionary Alexander Parvus (born Israel Lazarevich Gelfand, in Belarus), who met Lenin as early as 1900. (See "Alexander Parvus," *Wikipedia* <http://en.wikipedia.org/wiki/Alexander_Parvus>.) Soon after, two Dutch socialists, J. van Gelderen and S. De Wolff, developed theories on growth surges and depreciating rates of capitalist infrastructure. Given the close intellectual affinity between Lenin and Parvus, as well as Parvus's role in organizing German sponsorship of the Russian Revolution, my guess is that Lenin instructed Kondratieff's Conjuncture Institute to study the cycle discussed in Parvus's 1901 paper.

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John Budden grew up in Ottawa, Canada's capital, then studied in Europe before joining Dominion Securities in 1964. During his fifty years of diverse domestic and international investment experience, he has worked in London, New York, Boston, and Toronto, with travels around the world along the way, and Ottawa where he currently resides. In an era of competitive devaluations, he is a renowned advocate of holding a portion of one's portfolio in gold bullion, and provides specialized advice to pensions, endowments, and family offices. In addition to his investment activities, he has been CFRA News/Talk Radio's Markets Commentator since 2003, work that has included interviews with some of the world's best and brightest investment minds.