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Thunder Road Report

INFLATIONARY DEFLATION: creating a new bubble in money



Central banks versus the Long Wave

December 2012

Market Strategy

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INFLATIONARY DEFLATION: creating a new bubble in money

Excessive monetary stimulus and low interest rates create financial bubbles. **Central banks are creating the ultimate bubble in MONEY itself**, as they fight the downward leg in this Long Wave cycle.

First it was NASDAQ, then it was real estate and securitised debt, now it's money



Source: Jeff Kubina / Foter / CC BY-ND (and for front cover)

This is the biggest debt bubble in history. Each time DEFLATIONARY forces re-assert themselves, offsetting INFLATIONARY forces (monetary stimulus in some form) have to be correspondingly more aggressive to keep systemic failure at bay. The **avoidance of a typical deflationary resolution of this Long Wave is incubating a coming wave of inflation**. This will not be the conventional “demand pull” inflation understood by most economists.

The **end game is an inflationary/currency crisis, dislocation across credit and derivative markets, and the transition to a new monetary system**, with a new reserve currency replacing the dollar. This makes gold and silver the “go-to” assets for capital preservation.

Strategically, we are far more bullish on equities versus bonds. Tactically, equities face a volatile period - buffeted by alternating cycles of deflationary and re-flationary forces until they overcome bonds as the inflationary endgame unfolds. **In that scenario, equity investments should (over time) be aligned with the growing share of real disposable income directed towards essential expenditures, including energy, food/agriculture, personal & household care, mobile telephony and defence (for governments).**

The “Inflationary Deflation” paradox refers to the rise in price of almost everything in conventional money and simultaneous fall in terms of gold.

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This report is aimed primarily at equity investors. However, the Long Wave framework applies equally to other asset classes such as gold, commodities, government bonds and housing/real estate. The success of this framework in asset allocation during the four long waves since 1788 is discussed below – as well as potential investment strategies for the transition to the next long wave during 2013-15.

Executive summary

This report reviews prospects for 2013-15.

Long wave framework shunned by mainstream despite track record on asset allocation

My strategic framework is based on the **long wave or Kondratieff Cycle**, which is shunned by the mainstream. However, it does have advantages:

- Back testing it (below) shows that if you can identify which of the four phases of the long wave cycle you are in, you had an 90.1% chance overall of identifying which asset classes – out of **equities, government bonds, commodities, housing/real estate and gold** – would outperform and which would underperform during the last two centuries; and
- It also **highlighted the inevitability, if not the precise timing, of the 2008 “Great Financial Crisis.”**

Once again, it is signalling that **another crisis is looming on the horizon**.

It's the debt, stupid

It is **debt**, as much as anything else, which has driven the rise and fall in the long wave cycles of capitalist economies dating back to the Industrial Revolution. Debt brings forward consumption – and rapid growth in debt borrows more and more consumption from the future into the present – until the system becomes overloaded and needs to reset. **We have had three cycles in this process since 1788 and are currently in the late stages of the fourth.** This is the biggest debt crisis ever, but it seems to be in the nature of financial markets that, periodically, the lessons of history are forgotten.

Last three long waves resolved by deflations

In their final, downward phase (known as a “Kondratieff Winter”), the “resets” of the **last three long waves have occurred via deflationary depressions in the aftermath of financial crises.** Said financial crises were the Panic of 1825, Panic of 1873 and the Crash of 1929. Some of these “resets” were relatively short but very sharp, e.g. like 1929-33, while others were prolonged, e.g. the 23 years from 1873-96. **Historically, it's not been until excess debt, misallocated capital and speculative bubbles have been sufficiently purged from the system that a new long wave cycle begins.** Unpalatable as it is, we are stuck in the Kondratieff Winter of the current long wave which is why, no matter how much money policy makers have thrown at the problem, a robust and sustained recovery has proved elusive thus far. Indeed, today's policy makers are compounding the problem by **piling more and more debt on top of an existing debt mountain.**

Kondratieff Winter in this cycle began with NASDAQ crash in 2000

The final “Winter” phase of this long wave began with the NASDAQ crash in 2000 – when the debt/GDP ratio of 270% in the US economy was a similar level to the peak during the Great Depression. US debt/GDP is currently c350%. The natural tendency (i.e. economic gravity) towards deflation was overwhelmed by Greenspan's use of what were (then) unprecedented low interest rates (Fed Funds at 1%) to reflate the economy. This led to the next bubble in real estate and securitised debt. **When Lehman crashed in 2008, it took even lower interest rates (ZIRP), a bailout of the banking system and trillion dollar Federal deficits in the US, to reflate the economy.**

This time policy makers can create unlimited amounts of money in contrast to previous long waves

Unlike earlier cycles, we are in a world of UNLIMITED CREDIT CREATION. Central banks will not permit a debt deflation under any circumstances – which would likely bring on systemic failure at this point in any case. Keeping the bubble inflated is still taking trillion dollar deficits, but has recently been supplemented by open-ended money printing (QE), not just in the US, but by other central banks in the developed world. Apart from brief pauses, this process will continue.

This is creating the ultimate financial bubble, in MONEY itself, as every time deflationary forces re-assert themselves, the offsetting inflationary forces (monetary

There will still be debt reduction and deflation – just in a different form

stimulus) have to be more aggressive. **This is not sustainable and is incubating a coming wave of inflation, which will eventually explode in currency crises.**

The two key themes of Kondratieff Winters, **DEBT REDUCTION and DEFLATION**, will also play out in the resolution of the current long wave, just as they did in earlier cycles. However, due to extreme policy activism in creating money on the part of central banks, they will be in a different form:

- Debt reduction via **INFLATION**; and
- **DEFLATION** in the prices of almost everything in terms of gold.

The paradox of inflationary deflation

This is the paradox of simultaneous inflation and deflation, hence the term **“INFLATIONARY DEFLATION”** in the title of this report. The measurement of the inflation or deflation merely depends on the respective **definition of money**. Following the NASDAQ crash in 2000, we have had inflation measured in one kind of money and deflation measured in another:

- Inflation in the price of almost everything, i.e. goods, services and asset prices, in **CONVENTIONAL MONEY**; and
- Deflation in the price of almost everything – goods & services and asset prices – **IN HARD MONEY, i.e. GOLD**.

An approaching wave of inflation is far from a consensus view

This process is already fairly advanced but should accelerate as we go through 2013. **The approaching WAVE OF INFLATION across the US and the rest of the world during 2013-15** remains far from the consensus view and, therefore, deserves explanation.

We have been in an inflationary mega trend for more than a century!

Most commentators don't appreciate that we are already in an **INFLATIONARY MEGA TREND** and, as a result, are underestimating the in situ inflationary forces. The current price upwave, or “Great Inflation”, began in 1897. It is the fourth and most powerful in the last one thousand years. The second, which lasted from 1496-1650, became known as the “Price Revolution”, due to its severity at the time. The CAGR in the price level of 1.2% p.a. during those 154 years qualifies as “price stability” for today's central bankers!

The **forces which drew the last three Great Inflations to a close are NOT currently in prospect**. In the case of the first two, plague and warfare led to significant reduction in the world population. A decline in silver supply, then the world's money, also contributed to the second. In the third, Britain got sound money “religion” and adopted the gold standard in the wake of the inflationary Napoleonic Wars and the War of 1812.

Inflation picks up sharply in the latter stages of these “Great Inflations”

Looking back at the last three Great Inflations, **inflation accelerated in the late stages of all three**. The recent QE3 announcement by the Federal Reserve, with similar programmes by the ECB and BoJ, has pushed us into unprecedented situation of open-ended money printing across the over-indebted, developed world. **The debasement of currencies has moved into a more rapid phase**, which will lead to a repeat of the late-stage acceleration of inflation seen during earlier price upwaves, in my opinion.

Many commentators who disagree with the likelihood of a sharp upturn in inflation point to the comatose reading for the velocity of money. They overlook two facts compared to historic examples of high/hyper-inflations, such as Weimar. In the early stages of the rise in prices, the velocity of money can remain stable AND the rise in prices can lag the increase in the money supply – just as we are seeing today. Then a tipping point is reached, when velocity spikes upward and prices rise faster than the increase in the money supply, as **confidence in the value of the currency** suddenly plummets.

Foundations of the US dollar's reserve currency status are being dismantled but few commentators are paying attention

Looking at the US dollar, for example, **the foundations of its reserve currency status are being dismantled** while few commentators acknowledge the gravity of what is taking place. Let's briefly consider two "sacred cows" touted over the years as necessary to maintain its status as the world's reserve currency:

- **China HAS to buy US Treasuries:** because not to would jeopardise a vital trading partner and export market – "mutually assured destruction" for want of a better phrase. In reality, China is showing a marked reluctance to continue financing US deficits since its holdings are down US\$160bn from the peak in July 2011 (just before S&P downgraded the US AAA credit rating – no coincidence); and
- **The dollar has a MONOPOLY on world trade:** the BRICS nations signed an accord in March 2012 to increase trade in their local currencies – it is now policy. China is taking the leading role and has either begun trading in local currencies or agreed currency swaps in order to permit this with a long list of trading partners including: Germany, Japan, Russia, Australia, Brazil, Chile, Taiwan, UAE, Thailand, Indonesia, Malaysia and Kazakhstan. In July 2012, trade in Yuan accounted for 10% of China's trade compared with zero two years ago. Preparations to replace the dollar are advancing.

Eerily similar to what happened before the last change to the monetary system

What's happening today is **eerily reminiscent of the circumstances which led to the demise of the last monetary system (Bretton Woods) in 1971**. The main protagonist back then was France – then a major trading partner of the US. France was an outspoken critic of the existing system and the "exorbitant privilege" afforded the US by the dollar's reserve status. With large US deficits due to war (Vietnam) and welfare spending, France stopped buying US Treasuries and started buying gold aggressively. Bretton Woods collapsed as the value of the dollar and other currencies (e.g. British pound) fell sharply and the gold price surged. We have very similar circumstances today, with **China replacing France as the main protagonist**. China's President described the dollar's role as a "product of the past" last year and, like France, China has reduced its holdings of US Treasuries and is buying gold aggressively.

An inflationary crisis is looming on the horizon....

We are in the **incubation period for the coming inflationary crisis** – at the centre of which is the US dollar – although its decline might lag that of other major currencies, such as the Euro, Yen and Pound. This will not be the typical "demand pull" type of inflation recognised by mainstream economists (at least until its late stages, when there is a risk of a "crack-up boom"). Instead it will be caused by:

- Dramatic **LOSS OF CONFIDENCE** in the purchasing power of existing currencies: due to rapidly expanding central bank balance sheets (from monetising debt) and governments' inability to reduce VERY high deficits;
- **Declining need for dollars as they lose monopoly on world trade;** and
- **Rising prices for essential commodities, like food and energy.**

The term **"cost push" inflation** is arguably a better phrase for this type of inflation.

....leading to a new monetary system with a new reserve currency

When **inflation leads to more serious currency crises, we will see a "reset" and the transition to a new monetary system**. High level "insiders", such as the heads of the People's Bank of China and the World Bank have signalled likely elements of the new system. The dollar will be replaced as the reserve currency with a currency basket based on an **expanded version of the IMF's Special Drawing Right (SDR)**. The SDR is a reserve asset held by central banks which currently consists of the US dollar, Euro, Yen and Pound. In the new system, it is likely to be expanded to include the Yuan and possibly other BRICS currencies, and have some **indirect backing by gold** (at a much higher price).

Investment strategy

In a normal DEFLATIONARY Kondratieff Winter, asset allocation would be easy. Gold and government bonds would outperform, as they did in the Winter phases of previous long waves, while equities, commodities and real estate would underperform. Thanks to policy makers, this is not “normal” and deflation in conventional money is not on the agenda, so the purchasing power of currencies in the over-indebted, developed world must bear the brunt of this long wave resolution. I wish that equities were the best asset class in this scenario, but that is unlikely to be the case – the accolade belongs to monetary metals (gold & silver). However, I would put equities in third place behind the monetary metals and essential commodities (food & energy).

Equities

Equities normally underperform in inflation or deflation

Historically, equities have **underperformed during the inflationary (Summer) and deflationary (Winter) phases** of a Kondratieff long wave. While this does not augur well, the resolution of this long wave will be different as discussed - with significant implications for equity performance.

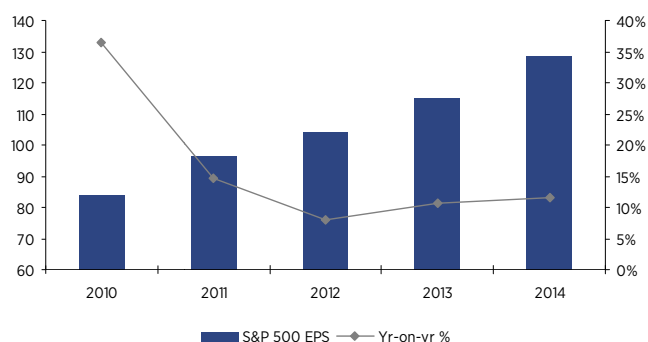
Near term, equities should be volatile - **moving in tandem with an alternating cycle of deflationary and re-inflationary forces** before we reach the final stages in the resolution of what is an abnormal Kondratieff Winter.

An inflationary end to this long wave presents a conundrum for equities

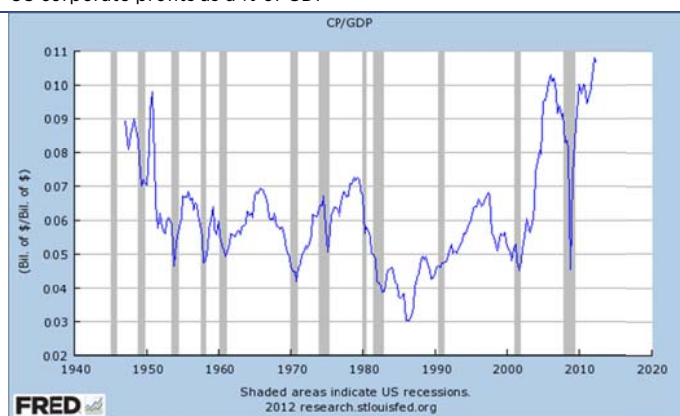
While my expectation is for an inflationary end to this long wave, this still presents a conundrum for equities. **On the negative side, there are challenges including:**

- The **debt-driven over-consumption** of recent decades has yet to be pared back. But the likelihood that debt will be inflated away is better for equities than the debt deflations at the end of previous long waves;
- There remains a high risk that EPS **estimates are too high**, at least in real terms. For the S&P 500, for example, Bloomberg consensus is for a further 10.6% EPS growth in 2013 and 11.9% growth in 2014. Meanwhile, corporate profits as a percentage of GDP are at an all-time high;

S&P 500: EPS and forecasts for 2013-14



US corporate profits as a % of GDP

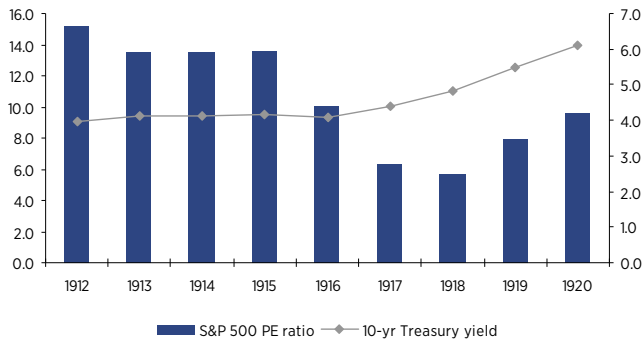


Source: Bloomberg

PE ratios shouldn't contract as much as in previous inflationary periods

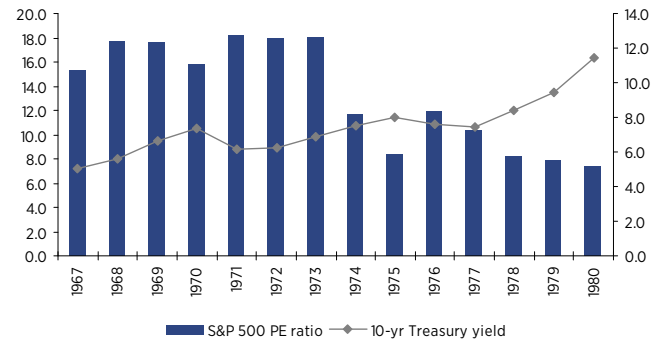
- The next two charts show how **PE ratios have compressed** during the inflationary phases of the last two long waves, i.e. 1912-20 and 1967-80. That said, you can see that interest rates rose significantly (and from much higher levels) during both periods – something which cannot happen this time without completely collapsing the world economy;

S&P 500 PE ratio (left) and 10-year Treasury yields 1912-20



Source: S&P, Federal Reserve

S&P 500 PE (left) ratio and 10-year Treasury yields 1967-80



Source: S&P, Federal Reserve

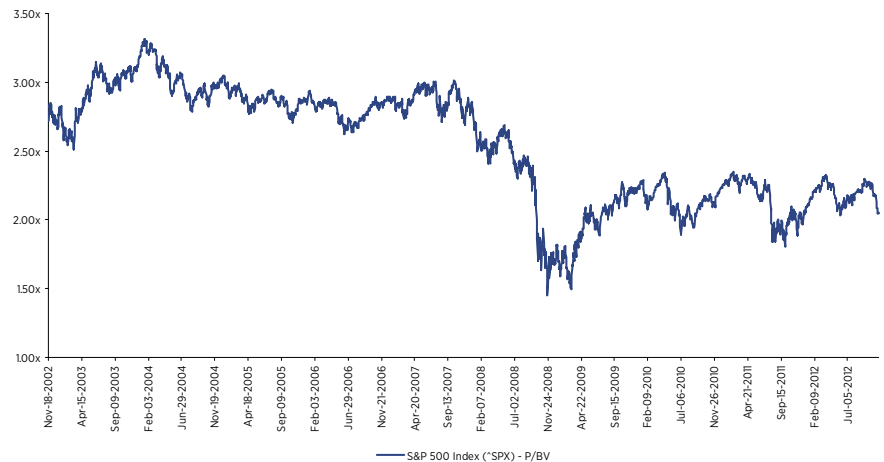
- **Demographics** in many western economies are unfavourable. On average, the peak in earnings and spending occurs at approximately 48.5 years of age. The US birth rate peaked in 1961, while the UK peaked a few years later.

On the other hand, **there are some significant positives for equities:**

Some real asset backing unlike government bonds

- Besides generating earnings, equities also have a reasonable degree of **“real asset” backing** in contrast to the paper “tokens” (bonds) of bankrupt sovereigns. The price to book value of the S&P 500 is in the mid part of its 10-year range;

S&P 500 price to book value (10 years)



Source: Capital IQ

- In a tough economic environment, CEOs are likely to be more effective at **cutting costs** than politicians;
- The **balance sheet of the corporate sector** as a whole is very strong at present;
- Many companies make **essential items** that we use every day;

Central banks and sovereign wealth funds starting to increase weightings in equities

Increasing equity allocations

In recent years, several **central banks** and sovereign wealth funds have begun to allocate a proportion of their reserves to equities. The Swiss National Bank had 12% (about US\$63bn) of its reserves in equities at the end of September 2012, up from 10% three months earlier. The Bank of Israel

invested 2% of its funds in equities earlier this year and plans to raise this to 10%. The Czech Republic has lifted its equity weighting to 10% and South Korea to 5.4%. According to a Reuters report from 5 October 2012: “Sixty percent of reserve managers consider that equities are more attractive than a year before, according to a survey of 54 central banks”

The BIG ONE....flows from the bond market in the final stages

- As we reach the final stages of this Kondratieff Winter, the biggest potential support for equity prices in my opinion is **CAPITAL FLIGHT OUT OF THE (VAST) BOND MARKETS** as the latter succumb to rising inflation.

Thematic strategies

In my scenario of a strong pick-up in inflation as we transit through 2013-15, the next question is what equity themes are likely to be successful. In my opinion, the answer is to **align equity investment with capital preservation and changes in real personal disposable income flows**. While high quality gold and silver equities are one way of playing capital preservation, a growing share of real disposable personal income will be directed towards essential expenditure such as:

- Energy (especially crude oil);
- Food/agriculture;
- Personal & household care;
- Mobile telephony & networking; and
- Defence (for governments).

Below are examples of large cap. stocks which should be beneficiaries:

Pan European		North America	
1.	Randgold Resources	1.	Goldcorp
2.	Fresnillo	2.	Pan American Silver
3.	Royal Dutch Shell	3.	ExxonMobil
4.	AMEC	4.	Schlumberger
5.	Centrica	5.	Southern Corp.
6.	Yara International	6.	Potash
7.	Syngenta	7.	ADM
8.	Nestle	8.	Kraft Foods
9.	Unilever	9.	Colgate Palmolive
10.	Smith & Nephew	10.	Johnson & Johnson
11.	Imperial Tobacco	11.	Philip Morris
12.	Vodafone	12.	Verizon
13.	ARM	13.	Qualcomm
14.	BAE Systems	14.	Lockheed Martin

Source: Seymour Pierce

Gold

No counterparty risk in a debt crisis

We are in the biggest debt crisis in history and **physical gold is the ONLY financial asset with no counterparty risk** and a several thousand year track record as a store of wealth par excellence. Furthermore, gold is the **only asset which outperforms during both inflation and deflation** and we are seeing a battle to the death in these opposing forces.

Some commentators doubt gold's outperformance during deflations, but a study of its performance during the **Winter (deflationary) phase of previous Kondratieff long waves** and the empirical work on the subject - **Roy Jastram's 1977 study, "The Golden Constant"** with data since 1560 - should suffice.

The prospect of an **eventual victory for the inflationary forces and the eruption of currency crises make physical gold (and silver) the go-to assets** in this scenario.

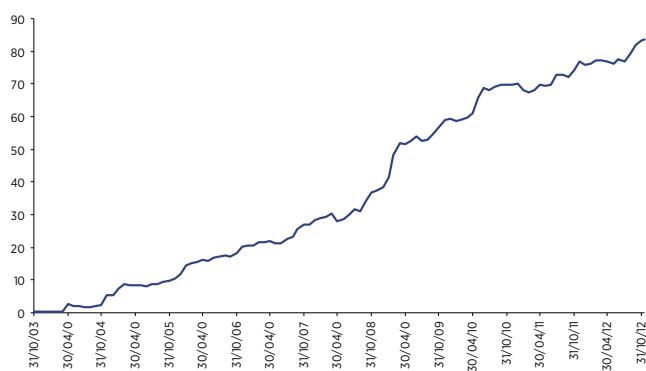
They continue to be shunned by many mainstream investors and are heavily under-owned.

End game – the valuation of gold is the reciprocal of the value of fiat money

Some investors are fearful that they will be too late joining an 11-year bull market. However, in the end game, the **gold price will reflect the reciprocal of the purchasing power of existing currencies, which are being debased at an increasingly rapid rate.**

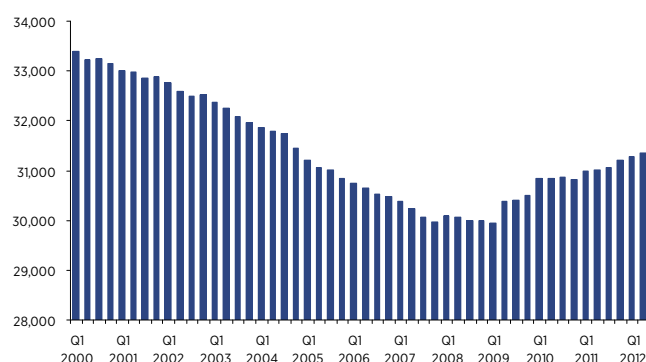
There is also evidence that gold is exhibiting “Giffen good” behaviour, i.e. **demand rises as the price increases.** For example, gold ETF holdings are at an all-time high and central banks, which had been heavy net sellers for decades, turned net buyers in 2008. China is at the leading edge of gold accumulation, with anecdotal evidence suggesting that (once again) additional purchases have gone unreported.

Total gold in all known ETFs (millions of oz.)



Source: Bloomberg

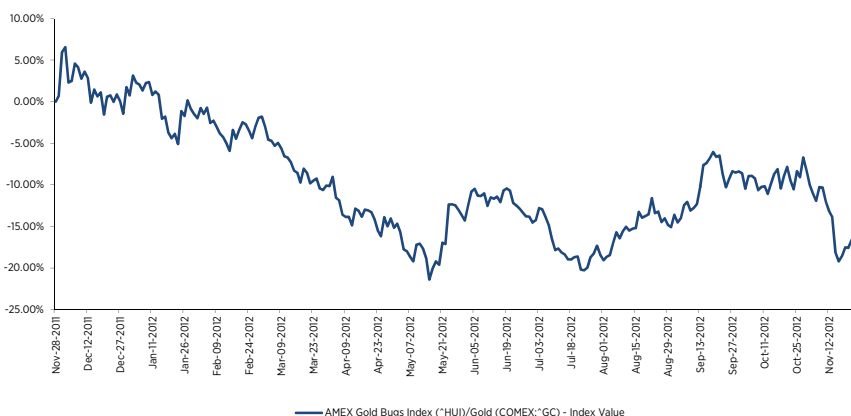
Central bank gold holdings since 2000 (tonnes)



Source: World Gold Council

With regard to gold equities, there are **signs that the long-running underperformance versus bullion may be bottoming out.**

HUI “AMEX Gold Bugs” Index versus the gold price (1-year)



Source: Seymour Pierce Ltd

Outperformance of commodities and government bonds – something will have to give

The next two asset classes – commodities and government bonds – bring us to another conundrum with regard to this Kondratieff Winter. Since the current one began in 2000, both have outperformed (in terms of the CRB Continuous Commodities Index and the benchmark 10-year US Treasury), beating stocks and real estate (albeit lagging gold). It is relatively rare for commodities and government bonds to outperform simultaneously, since the former tend to do

well during inflationary periods and the latter during low inflation/deflationary periods. In the great inflation versus deflation debate, one of these eventually has to give – government bonds in my opinion.

Commodities

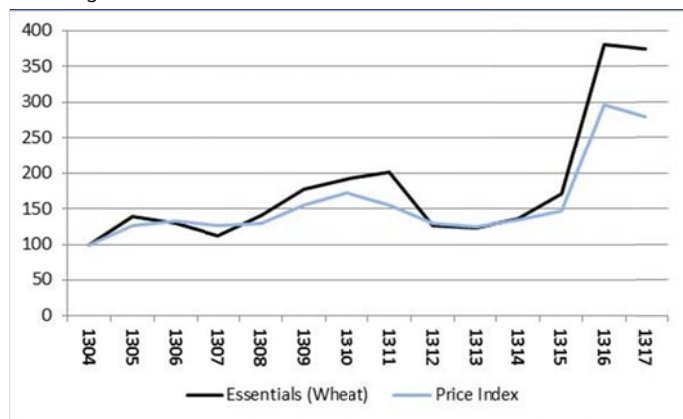
All commodities might NOT be equal

If inflation starts to pick up during 2013, commodities should continue the outperformance which stretches back to 2000. That said, if the end game is an inflationary recession/depression, there **could be a marked divergence between different categories of commodities**. Prices of essential commodities, such as energy and food, should perform better than those of industrial commodities, e.g. bulks, such as iron ore, and industrial metals, like copper and nickel.

Essential commodities outperform in the late stages of price upwaves

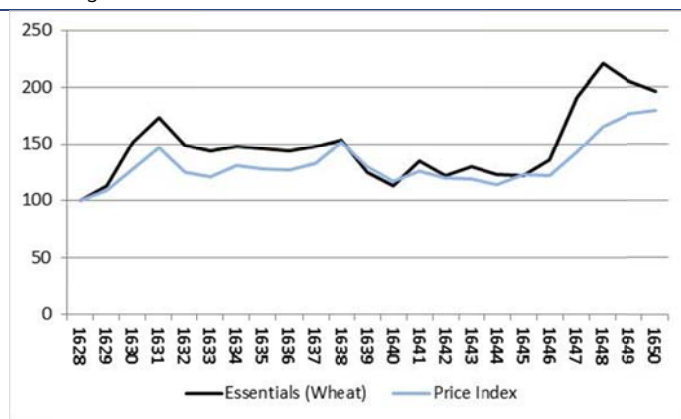
Taking a much longer-term perspective, I went back and looked again at the late-stage acceleration of inflation during the first three “Great inflations” of the last one thousand years. I wanted to see what happened to the **prices of essential commodities compared to the general price level during these periods**. Using wheat as the proxy, the charts below suggest that they outperform:

Final stages of first Great Inflation: 1304-1317



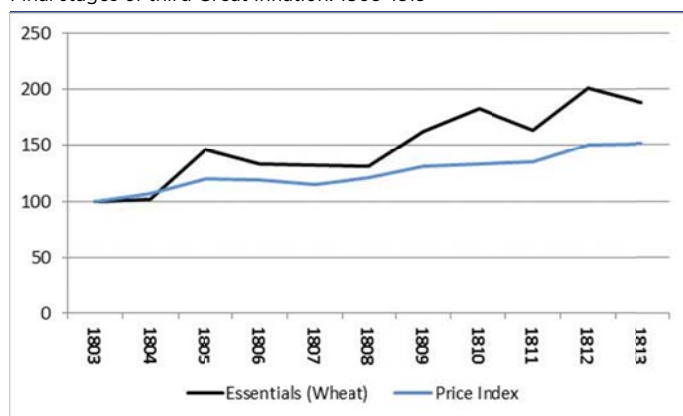
Source: The Price History of English Agriculture, Measuring Worth (Officer/Williamson)

Final stages of second Great Inflation: 1628-1650



Source: The Price History of English Agriculture, Measuring Worth (Officer/Williamson)

Final stages of third Great Inflation: 1803-1813



Source: The Price History of English Agriculture, Measuring Worth (Officer/Williamson)

Final stages of fourth Great Inflation: 2013-

The BIGGEST debt bubble in history

?

My guess is that the divergence widens

Source: Seymour Pierce

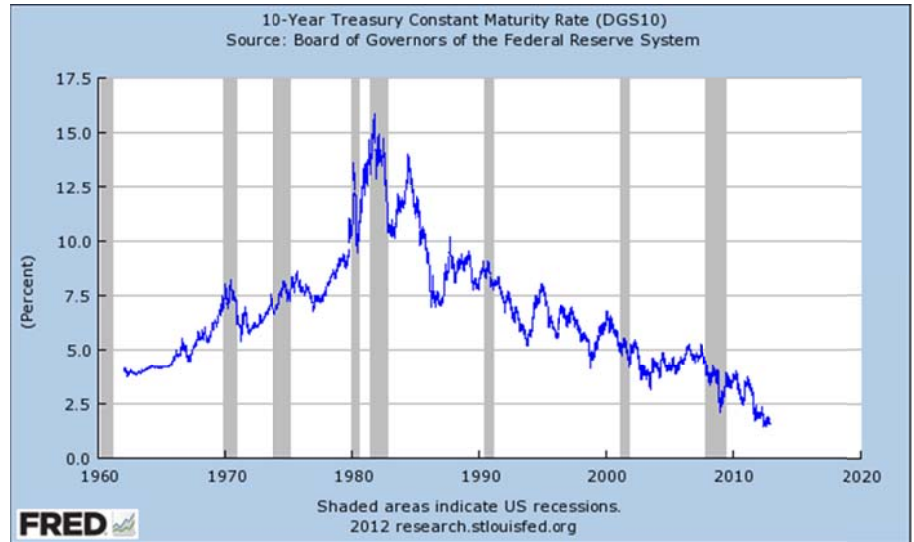
This gives me more conviction regarding the likelihood of **outperformance of essential commodities** during the latter stages of the current price upwave.

Government bonds

The three decade bull market

US government bonds have been in a **bull market for more than three decades**. This has seen the yield on the benchmark 10-year US Treasury decline from over 15% to a current level of 1.66% - as shown in the chart:

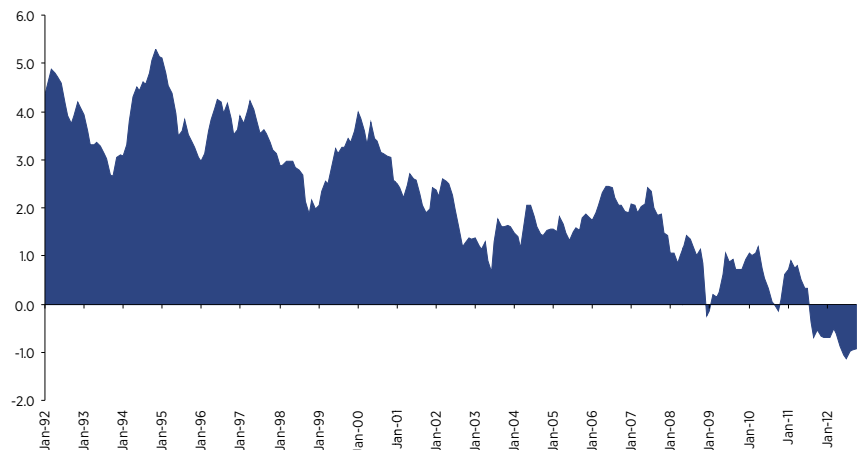
10-year US Treasury yield since 1962



Federal Reserve Bank of St Louis

Currently the **real yield on the 10-year Treasury is slightly negative** and the trend in real yield during the last decade is shown in the next chart:

Real yield on 10-year US Treasury since 2002 (%)



Source: Federal Reserve, Bureau of Labor Statistics

Inexorable decline in the quality of sovereign credit

What I would term as **overvaluation in the bonds of most sovereigns** stems from an overriding concern for capital preservation (at least while inflation remains relatively benign) in conjunction with intervention by central banks. As high levels of deficit spending and money printing continue, they are being directed towards the least productive parts of the economy, i.e. bloated government expenditure and the purchase of dubious financial assets (e.g. MBS and government debt). The quality of new government credit is continuing its inexorable decline, while the prices of some sovereign bonds (like US, Germany, Japan, UK, etc) are close to all-time highs.

One more big move down in sovereign yields?

Perversely, it would be **dangerous to rule out one more plunge downwards in bond yields** of the "better quality" (something of a joke) sovereigns as financial markets

grasp the enormity of the economic challenges we face. With hindsight, a new all-time low in the yield on the 10-year US Treasury might prove to be one of the most significant inflection points in modern financial history.

It's not just the PIIGS

One-by-one, we have seen sharp falls in the bonds of over-indebted sovereigns as markets lose confidence in their fiscal positions. We've seen what's happened to the PIIGS, but **all of the over-indebted developed nations are moving in the same direction**. For example, besides its trillion dollar deficits, the NPV of the unfunded liabilities of the US government are between 60-212 trillion dollars. Inflation is the only way out.

Housing/Real Estate

It might be a real sset...

Given its status as a **"real" asset**, housing/real estate normally outperforms during the inflationary (Summer) period of a long wave. An obvious conclusion, therefore, is that when inflation picks up in this "abnormal" Winter phase, housing/real estate is certain to outperform. However, my sense is that it could be slightly more complicated.

....but it's also a leveraged one

Real estate/housing is (generally) a leveraged asset. During previous Summer phases of a long wave, the economy was much less leveraged than it is now. We are in the midst of Winter and economies are overleveraged, hence even a relatively modest rise in interest rates could risk a significant volume of defaults in this asset class. A period of economic hardship could also limit credit availability with a knock-on effect on the ability of housing/real estate markets to clear.

Commercial real estate could also face **further challenges** from a new round of crisis in the financial services sector and the cannibalisation of the retail sector from the rising share of on-line sales. In summary, **I expect housing/real estate prices to rise, but to lag the increase in CPI measures of inflation**. In my opinion, prime and near-prime real estate are likely to outperform the sector.

Introduction – a long wave framework

Long wave analysts anticipated the 2008 crisis

In 2006, I created a framework to put the global macro picture into a strategic context. **Its foundation is the “Long Wave” or “Kondratieff Cycle” (K-Cycle).** Back then, most people were bullish – stock markets were rising, house prices were high and unemployment was low - but they didn't see how financial markets and the global economy were approaching a precipice. Below is a quote from a research paper written by Askar Akaev (and colleagues) – who is the former President of Kyrgyzstan and now Professor for Mathematical Investigations of Complex Systems at Moscow State University – in 2010:

“For most of the expert community, this deep economic crisis was totally unexpected....Only those who analyzed the situation as **based on the theory of Kondratieff long waves** expected a cyclic world economic crisis in 2008-2010.”

Shunned by the mainstream – no surprise

Professor Akaev is exaggerating, although he might be slightly biased, having been awarded the Gold Kondratieff Medal by the International N. D. Kondratieff Foundation earlier this year. While an approaching crisis was crystal clear from a long wave perspective, other analysts also predicted the crisis via alternative methods.

Surprisingly, however, hardly any analysts use a long wave framework and it is **shunned by economists** (I am not one) as Wikipedia highlights:

“Kondratieff waves (also called super cycles, long waves, K-waves or the long economic cycle) are described as sinusoidal-like cycles in the **modern capitalist world economy**. Unlike the short-term business cycle, the long wave of this theory is not accepted by current mainstream economics.”

Nikolai Kondratieff



Source: Belleggnopdegolven

Edward R. Dewey



Source: Cycles rsearch Institute

Paradoxically, a lack of acceptance by mainstream economists might be one reason to take it seriously. An **economic long wave was also identified by an American, Edward R. Dewey**, and this Wikipedia comment about him is priceless:

“Dewey first became interested in cycles while Chief Economic Analyst of the Department of Commerce in 1930 or 1931 because President Hoover wanted to know the cause of the Great Depression. **Dewey reported that each economist he spoke**

to gave him a different answer and he lost faith in the current economic methods.”

What is it about cycles?

Dewey subsequently set up the “**Foundation for the Study of Cycles**” (FSC) and here is Wikipedia discussing the reaction to his work:

“Dewey noticed a peculiar reaction from people when he discussed cycles with them... a reaction that seemed to combine amusement, skepticism, and a certain suppressed fascination. As Dewey put it, ‘**Cycles *get* people. Pro or con, the idea engages strong emotions.** One of our greatest problems is to keep people’s thinking about our work on a level-headed plane.”

The high profile former Chairman of Princeton Economics, Martin Armstrong, whose own cycle work predicted (almost to the day) the 1987 crash, 1989 crash in the Nikkei and the beginning of the sub-prime crisis in 2007, was President of the FSC during the 1990s. According to the summary of an article about Armstrong in the New Yorker in 2009:

“Cycle theory is a kind of Gnostic offshoot of technical analysis. (The article) Mentions other thinkers who have studied cycles and market timing, including Nikolai Kondratieff, Joseph Schumpeter, Bill Erman, and Arch Crawford. The writer was told repeatedly that **some of the biggest investors out here** view even the wackier cycle theories with respect.”

Scepticism is understandable

However, I can also understand the scepticism - as Nathan Mager, author of “The Kondratieff Waves”, explained:

“There is a **general reluctance** to accept the fact that economic forces run in preordained, mechanistic cycles, particularly those forces involving the actions of intelligent humanity. The doctrines of free will and the human capacity for self-determination is as deeply ingrained in us as religious belief.”

Fourth long wave needs to be interpreted in a world of unlimited credit creation

I think Mager’s comment regarding the long wave or Kondratieff Cycle needs correcting. The first three long waves of the industrial age, from 1788-1934, did indeed run in fairly “preordained mechanistic cycles” (see below). However, the western world was operating on a gold standard for most of that period. The **current cycle needs CAREFUL INTERPRETATION in today’s world of unlimited credit creation** following the collapse of the Bretton Woods system in 1971. Even more so, now that Ben Bernanke and his central banking colleagues are resorting to “unconventional” methods of monetary policy. Despite the move to un-backed floating currencies, two key conclusions of this report are that:

- Key **themes of these long waves WILL CONTINUE TO PLAY OUT**; and
- **Another CRISIS is looming on the horizon.**

Before we get into that, let me briefly summarise some of the key aspects of these long waves. In the 1920s, **Kondratieff concluded that there was a long wave in economic activity in the capitalist system which averages 50-60 years.** In 1928, when Lenin removed him from his position, Kondratieff had identified two full cycles of this long wave, stretching back to the late eighteenth century, and part of a third.

Kondratieff long waves bring together economic, social and political issues

Key elements of Kondratieff long waves include **fluctuations in the price level (CPI), the amount of debt in economies, GDP growth, interest rates and the performance of different asset classes.** However, it is also considerably more complex, bringing together inter-relationships between economic activity and financial markets with **social and political issues, including investor psychology (e.g. speculative bubbles), technological innovations, wars, revolutions, demographic changes and labour relations.** In short, many of the things which contribute to the ebb and flow of world affairs.

Driving force is debt

While the long wave is primarily defined by prices (inflation/deflation), one of the **driving forces of the long wave is DEBT**. Typically, there is a rising trend in debt for most of the cycle's duration followed by the extinguishing of some of that debt in its (painful) late stage, which is known as a "Kondratieff Winter" (K-Winter). The financial author, Bob Hoyer, grasped the essence of what happens in the following quote:

"To be serious, there is **only one financial history and it repeats. A great asset inflation, otherwise known as a bubble, climaxes and collapses.**"

That, in the most concise terms possible, describes the history of the western economic system since the Industrial Revolution as I'll explain. We are in the **latter stages of the fourth of these "Great Inflations."**

Average length is 50-60 years, but it can vary

Just like empires and even human beings, **capitalist economies go through a cycle where they rise, flourish, and fall into decline**. The first long wave (1788-1843) of the Industrial Age lasted approximately 56 years and the second (1844-1896) 53 years. It's my belief is that that these long waves need to be interpreted in a flexible, rather than rigid, way. For example, they can be shorter or longer than the normally prescribed (by Kondratieff and Dewey) 50-60 years.

The reason for this, in my opinion, is that they are also **impacted by other cycles**, some shorter and some much longer (see below). This can be visualised as the interaction of waves of different frequency and amplitude in a ripple tank. They can also be influenced by **extreme levels of intervention on the part of governments and central banks** – as is currently the case. My analysis shows that the then uncompleted third cycle identified by Kondratieff lasted only 37 years (1897-1933), while the current one has lasted considerably longer than the typical 50-60 years.

Current long wave – forming a new bubble

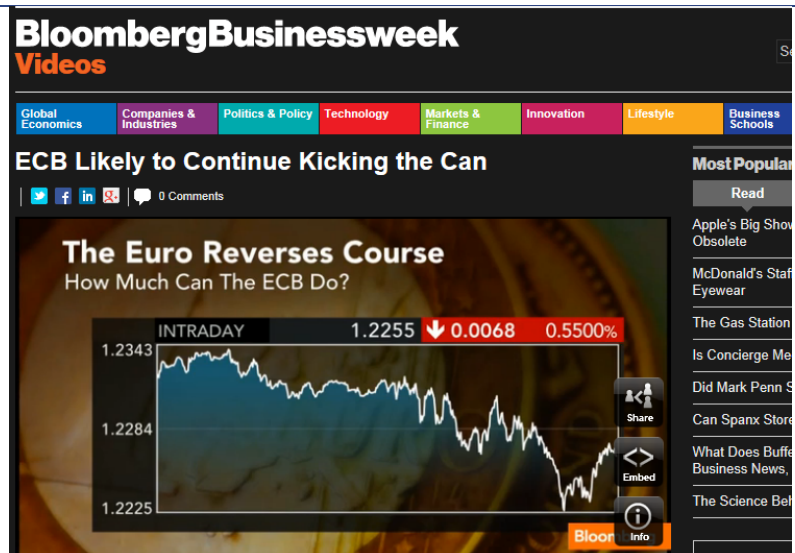
Current long wave began in 1934

The **current (fourth) Kondratieff long wave has already lasted 77 years** (1934-). Some of the reasons why the current long wave is already much longer than those that have gone before should be obvious:

- During the three earlier cycles, the world was on a **gold standard most of the time**, although it was usually suspended during wars. Then Nixon closed the “gold window” in 1971 and everything changed; and
- In this long wave, **policy makers have used an unprecedented ability for credit creation** (QE, bailouts, deficits, etc.), to subvert free market forces which would (otherwise) have brought it to an end.

We are **stuck in the Kondratieff Winter** of this long wave, contrary to what many analysts would like to believe. The problem that we face is that we haven’t experienced much of the “payback” yet, as round after round of monetary stimulus has kicked the proverbial can down the road. Unfortunately, the bigger the Ponzi scheme which the bankers and politicians are allowed to create, the more problematic the adjustment is likely to be – unless we are very lucky.

Always kicking the can



Source: Bloomberg

In this long wave, it was obvious that policy makers would try to inflate their way out of crisis

It was obvious before the crisis hit in 2008, that when it did, **central bankers and politicians (who created the problem) would step in with massive offsetting monetary easing and debt/credit creation**. Back in 2007, I wrote:

“The biggest credit bubble in modern history is showing signs of unravelling in the US. Debt/credit expansion brings forward consumption – it must **either be purged in a deflationary recession or inflated away through currency debasement.**”

Greenspan started it and Bernanke is going “all in”

Greenspan resorted to reflation in the wake of the 2001 recession and **Bernanke had already outlined his forthcoming inflationary strategy in speeches like the famous “Deflation – making sure it doesn’t happen here” (“Helicopter speech”) from November 2002**. Such speeches outlined his willingness to experiment with extreme monetary policies – hence the recently announced open-ended QE3 (while significant) was not really surprising. Unfortunately, as J.K. Galbraith noted:

“The world of finance hails the invention of the wheel over and over again, often in a more unstable version.”

Previous Kondratieff Winters were deflationary

While I sided with an eventual inflationary outcome for the resolution of this K-Cycle, **previous K-Cycles had always been resolved by DEFLATIONARY “Winter” phases.**

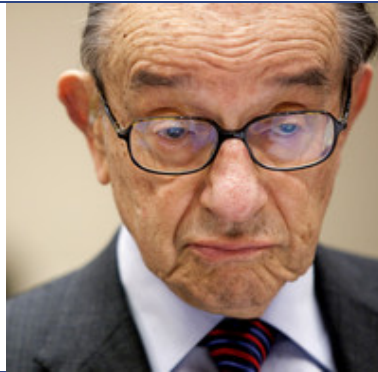
Lenin asked Kondratieff to study cycles in the capitalist system to establish how and when it would fail, **Kondratieff concluded that the capitalist system was inherently self-regenerating. It rose, fell, and rose again on the foundation of FREE MARKETS and creative destruction. There lies a tragic irony in what is unfolding.**

Until along came today's central planners

Heavy-handed market interventions of today's central planners – de facto socialist policies – have subverted free market capitalism. Rather than leaving the system to work off the excess by its own devices, as in previous cycles, the **natural ability of free markets to self-correct has been short-circuited.**

It began in 2000 with Greenspan's response to the NASDAQ Crash and subsequent recession. Most people still fail to realise the **gigantic policy mistake made by Greenspan in 2000 – and followed in even more reckless fashion by Bernanke.**

“Easy Al”



Source: Bloomberg

“Helicopter Ben”

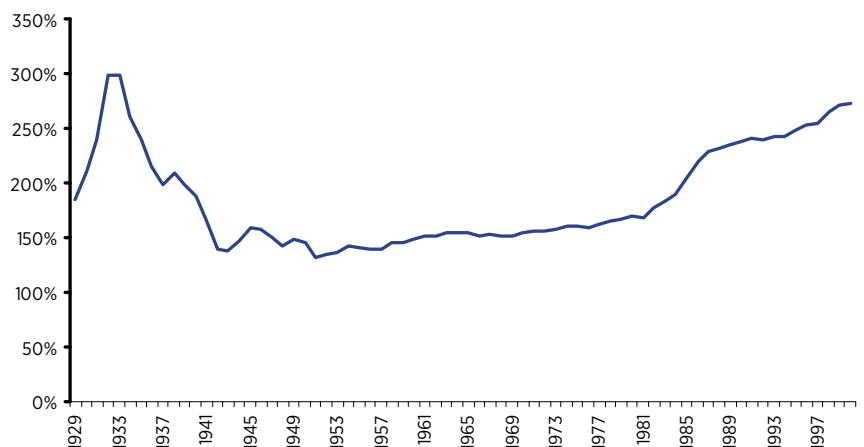


Source: Bloomberg

If only Greenspan had left things to the markets....

If Greenspan hadn't taken what (back then) were extreme measures at the time, e.g. dropping the Fed Funds from 6.5% in May 2000 to 1.0% in June 2003 and leaving it there for 12 months, the subsequent mild recession would have taken the form of a more serious debt deflation. While more painful, **it would have “cleared the decks” – ridding the system of excess debt and misallocated capital.** Debt/GDP in the US economy in 2000 was similar to the peak (1933) during the Great Depression.

US total debt/GDP from 1929-2000



Source: Federal Reserve, Bureau of Economic Analysis

From bubble to bubble to bubble	<p>Without Greenspan and Bernanke's interventions, we would now be basking in the early stages of a new cycle, instead of contemplating the problematic resolution of the current one.</p> <p>Debt is being piled on top of debt and misallocated capital on top of misallocated capital and the bubble has moved on from equities (especially NASDAQ stocks) and real estate/securitised debt and a new one is forming in MONEY itself.</p>
How will the debt be extinguished?	<p>Given the ongoing interventions by the central planners, there will be some important differences in the way that this long wave ends and we transition to the next one. In particular, the way in which debt is extinguished compared with previous cycles? C.V. Myers, a market guru from the 1960s and 1970s, argued that:</p> <p>"Ultimately, every penny of every debt must be paid — if not by the borrower, then by the lender."</p>
Ultimately, someone will pay	<p>However, as financial blogger, FOFOA, pointed out:</p> <p>"someone will pay. But there is a third option that is missing from Myers' dictum. 'The hit' can be socialized...if it cannot be worked off by future labor, it will be worked off by past labor, the net surplus of which was erroneously stored in debt and dollars. The icing on the cake is that it is also the past labor of 'someone else,' if the profits can be capitalized and the losses socialized. Precisely the process we have witnessed over the past three years, for those with eyes to see."</p> <p>He then referenced the famous "front lawn" quote from an anonymous, but prophetic, source in the gold market writing more than a decade ago:</p> <p>"My friend, debt is the very essence of fiat. As debt defaults, fiat is destroyed. This is where all these deflationists get their direction. Not seeing that hyperinflation is the process of saving debt at all costs, even buying it outright for cash. Deflation is impossible in today's dollar terms because policy will allow the printing of cash, if necessary, to cover every last bit of debt and dumping it on your front lawn! (smile) Worthless dollars, of course, but no deflation in dollar terms!"</p>
We're going to require a new system	<p>Hyperinflation would be socially and politically unacceptable, so we are unlikely to reach that stage. Instead the system will be changed when it begins to show signs of impending failure. In the words of the famous trader, W.D. Gann, in his prediction of the 1929 Crash:</p> <p>"When the time cycle is up, neither Republican, Democrat, nor our good President Hoover can stem the tide. It is natural law. Action equals reaction in the opposite direction. We see it in the ebb and flow of the tide and we know from the full bloom of Summer follows the dead leaves of winter."</p> <p>The Federal Reserve and other central banks would have us believe that that they can control the ebb and flow in the natural cycle of capitalist economies. They can, but not indefinitely. We are starting to run out of road.</p>

Why is the long wave useful for investors?

Data used in long wave analysis

In my analysis of the long wave, I've collected data back to 1788 including:

- Prices – price levels and inflation (CPI) rates;
- Total debt in the economy (see below);
- Government bond yields;
- GDP growth (real and nominal);
- Gold price;
- Equity indices (since 1800);
- Commodity prices; and
- Real estate (house) prices (since 1896).

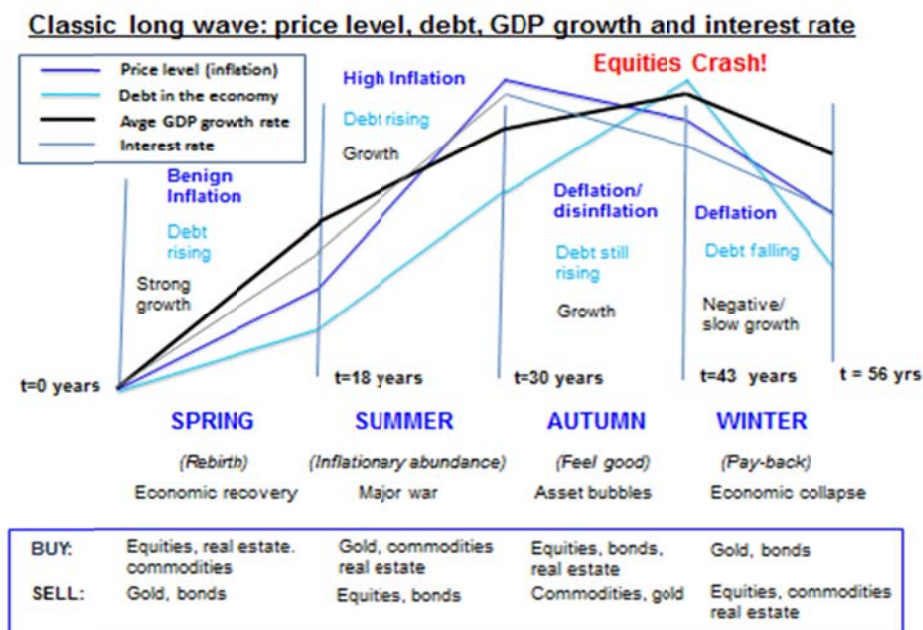
UK data used for the first long wave and US data since

I have used **UK data for the first long wave (1788-1843)** and **US data since**. The data for first three long waves is complete with only three exceptions:

- Data for equity prices for the Spring of the first long wave, i.e. 1788-98;
- Data on house prices for the first two long waves; and
- Private debt levels in the UK and US prior to 1912, so debt levels are confined to the public (government/federal) sector before then.

Idealised Kondratieff long wave showing price level, debt and GDP growth

Below is my **infographic of an “idealised” Kondratieff long wave** with the four “seasons”, price level, debt, GDP, interest rate and which asset classes to buy and sell:



Source: Seymour Pierce

Kondratieff long waves can be divided into four phases or “seasons”

Just like the seasonal changes during a year, the **rise and fall of the capitalist economy during the course of a long wave can be split into four phases or “seasons”, i.e. Spring, Summer, Autumn and Winter.** In qualitative terms, they can be summarised as:

Long wave “seasons”

Trend	Season	Overview
Upswing	Spring	The economy experiences renewed growth
	Summer:	Economy reaches its peak with elevated inflation levels
Downswing	Autumn	Start of the decline, but masked by debt-driven consumption and financial bubbles
	Winter	The pay-back – economic hardship as “excess” purged from system

Source: Seymour Pierce Ltd, Ian Gordon

Long wave analysis has strong track record on asset allocation

During the last 224 years, if you had been able to determine which of the Kondratieff “seasons” you were in, you had a **VERY HIGH PROBABILITY (90.1%)** of identifying which asset classes - out of equities, bonds, commodities, housing/real estate and gold - would outperform and (by default) which will underperform.

Furthermore, it is worth noting that there is a **set of signals which have been reliable indicators for the transition from one phase to another.**

I will provide **detailed justification for these “Outperform” or “Underperform” (and the occasional “Neutral”)** later in the report.

First long wave (K-1)

Here are the results for the data for K-1, the first long wave, from 1789-1843. It shows that **on 13 out of 15 occasions the performance of stocks, government bonds, commodities and gold asset classes was in line with what would be expected in a “classic” K-Cycle:**

First long wave (K-1): performance of asset classes versus prediction

Long wave season	Predicted performance	Asset class	Outcome
Spring	Outperform	Commodities	YES
	Underperform	Gold	YES
	“	Govt. Bonds	YES
Summer	Outperform	Gold	YES
	“	Commodities	NO
	Underperform	Stocks	YES
Autumn	“	Govt. Bonds	NO
	Outperform	Stocks	YES
	“	Govt. Bonds	YES
Winter	Underperform	Gold	YES
	“	Commodities	YES
	Outperform	Gold	YES
	“	Govt. Bonds	YES
	Underperform	Stocks	YES
	“	Commodities	YES

Source: Seymour Pierce

Second long wave (K-2)

In the second K-cycle from 1844-1896, which includes equity prices for all four phases, **on 14 of 16 occasions, asset classes behaved in accordance with the predicted outcome.**

Second long wave (K-2): performance of asset classes versus prediction

Long wave season	Predicted performance	Asset class	Outcome
Spring	Outperform	Stocks	YES
	"	Commodities	YES
	Underperform	Gold	YES
	"	Govt. Bonds	YES
Summer	Outperform	Gold	YES
	"	Commodities	YES
	Underperform	Stocks	NO
	"	Govt. Bonds	YES
Autumn	Outperform	Stocks	NO
	"	Govt. Bonds	YES
	Underperform	Gold	YES
	"	Commodities	YES
Winter	Outperform	Gold	YES
	"	Govt. Bonds	YES
	Underperform	Stocks	YES
	"	Commodities	YES

Source: Seymour Pierce

Third long wave (K-3)

In the third K-Cycle from 1897-1933, I have included data for housing/real estate as the fifth asset class. During this long wave, **on 18 out of 20 occasions, asset classes outperformed or underperformed as expected and one was neutral.**

Third long wave (K-3): performance of asset classes versus prediction

Long wave season	Predicted performance	Asset class	Outcome
Spring	Outperform	Stocks	YES
	"	Commodities	YES
	"	Real Estate	YES
	Underperform	Gold	YES
Summer	"	Govt. Bonds	YES
	Outperform	Gold	NO
	"	Commodities	YES
	"	Real Estate	YES
Autumn	Underperform	Stocks	YES
	"	Govt. Bonds	YES
	Outperform	Stocks	YES
	"	Govt. Bonds	YES
Winter	"	Real Estate	YES
	Underperform	Gold	YES
	"	Commodities	YES
	Outperform	Gold	YES
	"	Govt. Bonds	YES
	Underperform	Real Estate	NEUTRAL
	"	Stocks	YES
	"	Commodities	YES

Source: Seymour Pierce

Fourth long wave (K-4) – Spring, Summer and Autumn

Moving on to the incomplete fourth K-Cycle (K-4), which began in 1934, my belief is that the Autumn phase concluded with the crash of the TMT stocks in 2000. The table below shows that during 1934-2000, K-4 was the most “perfect” K-Cycle of all in terms of asset prices behaving according to a “classic” K-Cycle. **During Spring, Summer and Autumn, on all 15 occasions, the five asset classes outperformed or underperformed as predicted.**

Fourth long wave (K-4) up to 2000: performance of asset classes versus prediction

Long wave season	Predicted performance	Asset class	Outcome
Spring	Outperform	Stocks	YES
	"	Commodities	YES
	"	Real Estate	YES
	Underperform	Gold	YES
	"	Govt. Bonds	YES
Summer	Outperform	Gold	YES
	"	Commodities	YES
	"	Real Estate	YES
	Underperform	Stocks	YES
	"	Govt. Bonds	YES
Autumn	Outperform	Stocks	YES
	"	Govt. Bonds	YES
	"	Real Estate	YES
	Underperform	Gold	YES
	"	Commodities	YES

Source: Seymour Pierce

Uncompleted Winter phase of the current long wave

We are currently in the uncompleted Winter phase of K-4. Thus far, four of the five asset classes have performed as would be expected in a typical Kondratieff Winter. **Gold and government bonds have outperformed while equities and housing/real estate have underperformed. The outlier has been Commodities which have outperformed instead of underperforming.** This reflects the different way in which this long wave will be resolved – not deflationary - due to unprecedented intervention from central banks and governments (see below) and the growth of China.

Winter of fourth long wave (K-4) so far: performance of asset classes versus prediction

Long wave season	Predicted performance	Asset class	Outcome
Winter	Outperform	Gold	YES
	"	Govt. Bonds	YES
	Underperform	Real Estate	YES
	"	Stocks	YES
	"	Commodities	NO

Source: Seymour Pierce

Before we analyse how the rest of this current long wave will play out, let's look at the long wave in greater depth.

Detailed analysis of the Kondratieff long wave

Dating the four long waves since 1788

We are currently in the fourth long wave since the late eighteenth century as discussed. Kondratieff himself focused on prices/inflation in defining the cycles and I have used a similar approach. In the table below, I have defined **the beginning and end of the respective long waves based on my own analysis and compared it with the timing used by Kondratieff and the consensus of other analysts.**

Dates of the four long waves since the Industrial Revolution

Long wave	SP estimate	Length (years)	Consensus	Length (years)
K-1	1788-1843	56	1789-1845	57
K-2	1844-1896	53	1846-1896	51
K-3	1897-1933	37	1897-1948	52
K-4	1934-	79	1949-	64
Avge		56.3		56.0

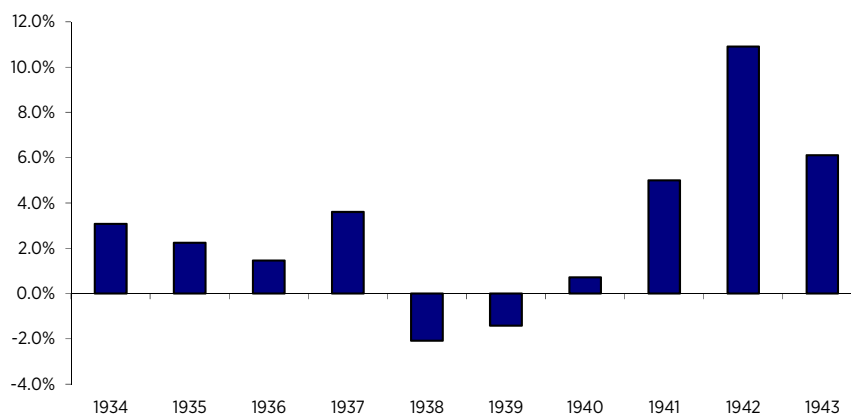
Source: Seymour Peirce, literature on Kondratieff Cycles

K-3 was much shorter than the average 50-60 years in my opinion

In my opinion, while the long wave AVERAGES 50-60 YEARS, **the duration of the third cycle (K-3) was only 37 years from 1897-1933** - not the 52 years from 1897-1948 which is the consensus. Identifying K-3 as a 52-year cycle is aesthetically pleasing, since it would put the duration of the first three cycles into a narrow 52-56-year range - even though the current one would still be considerably longer. However, in my opinion, this is incorrect and (briefly) the reasons are:

- If, as everybody accepts, the current K-cycle is considerably longer than the 54 year average, there's **no reason** why a cycle can't be shorter than average; and
- The price index for the US economy bottomed in 1933 and recovered during the four years 1934-37 with inflation running at 1.5-3.6% p.a. during that period. The **subsequent entry of the US into World War II led to a surge in inflation (albeit short-lived) of between 5.0-10.9% p.a., during 1941-43.** This is at odds with the normal characteristics of a K-Winter.
- The short-lived and modest deflation in 1938-39 (-2.1% and -1.4%) was caused by a **policy mistake on the part of the Federal Reserve**, which raised reserve requirements after the recovery was already established.

US rate of inflation (CPI) 1934-43

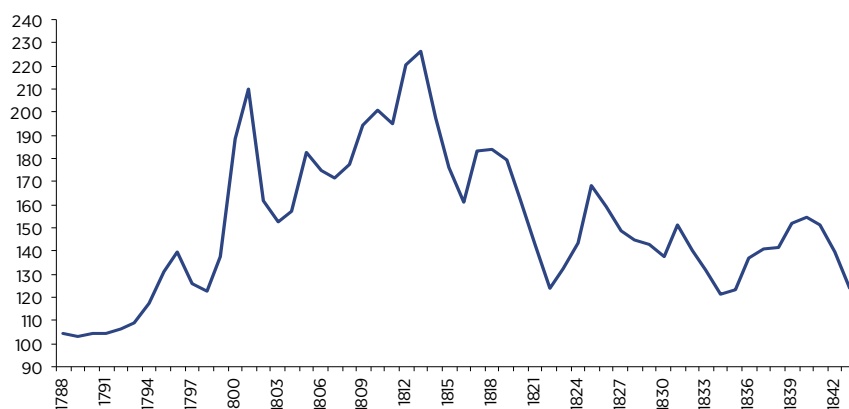


Source: Bureau of Labor Statistics

Price level charts for first three long waves

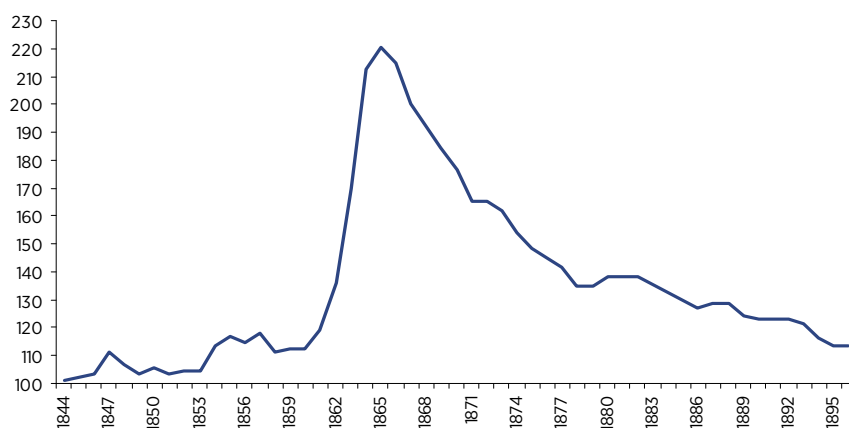
Based on my timing of the K-Cycles, here are the charts for the **PRICE LEVEL (in terms of the consumer price index)** for the first three long waves:

First long wave (K-1): consumer price index 1788-1843 (rebased 1787 = 100)



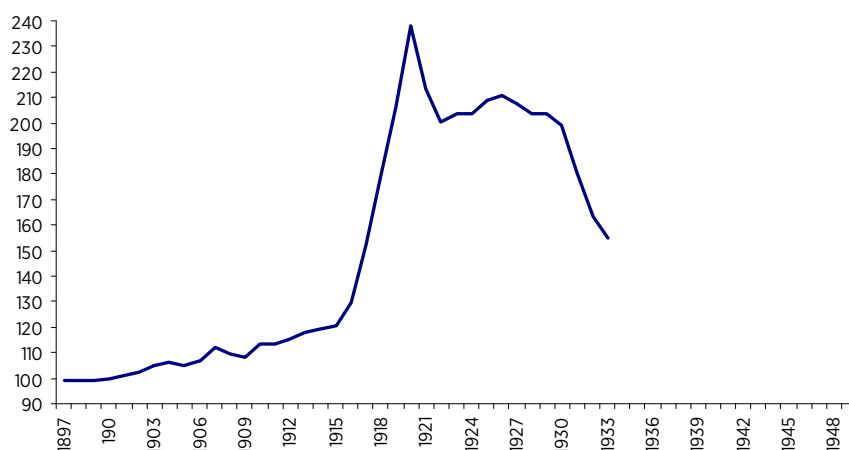
Source: ONS

Second long wave (K-2): consumer price index 1844-1896 (rebased 1843 = 100)



Source: Measuring Worth

Third long wave (K-3): consumer price index 1897-1933 (rebased 1896 = 100)

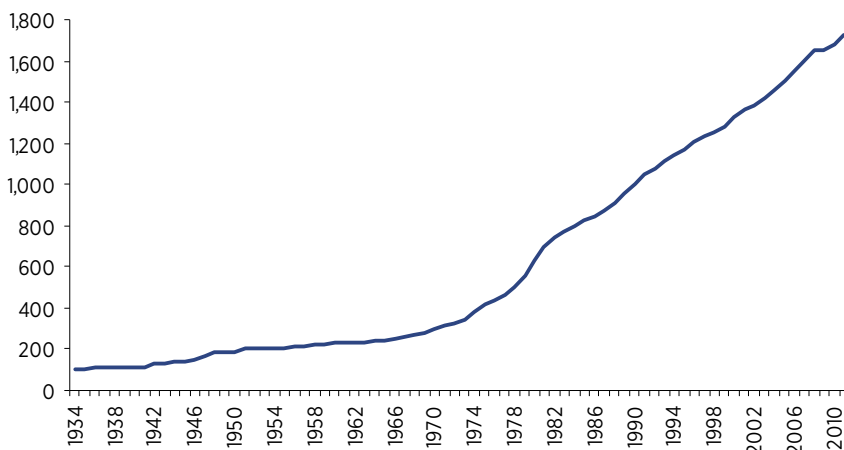


Source: Measuring Worth, Bureau of Labor Statistics

K-4 looks completely different due to the demise of Bretton Woods

Now something which, at first sight, looks totally different – the **chart for the fourth long wave**. This shows the price level from 1934 through 2011:

Fourth long wave (K-4): consumer price index since 1934 (rebased 1933 = 100)



Source: Bureau of Labor Statistics

While it appears to bear no relation to the three earlier charts, **the same process has been unfolding to a large extent** (minus an “endgame” so far) if the data is interpreted in light of the **unprecedented ability of policy makers to create money post-Bretton Woods**. I will explain this in detail later in the report – please bear with me.

Debt brings forward consumption – borrowing demand from the future

Debt is one of the MOST critical drivers of long waves, and the one which is most reflected in the trends in price levels/CPI, economic growth and asset prices, is DEBT:

- During the Spring, Summer and Autumn phases, **rising debt brings forward consumption/output**, i.e. demand is borrowed from the future into the present;
- In the Winter phase, **the reversal of the earlier debt-driven OVER-CONSUMPTION has the opposite effect**, with the decline in consumption/output taking citizens, firms and financial markets by surprise; and
- The **acceleration or deceleration in debt growth has a “supercharged” effect on financial markets**.

Debt is great until there's too much of it

The relationship between debt and consumption is deceptively simple, but it has a very powerful effect on economies and markets which is under-estimated. For many years in every cycle, nobody pays any attention, because the effects are nearly all virtuous. Get a loan and go into debt and you don't have to save for years for that house, car, loft extension or factory, it's yours tomorrow. And when everybody is doing it!

Debt bubbles get reflected in GDP and asset prices

Since debt brings forward consumption, **the massive amount of debt in western nations HAS (past tense) already been reflected in their GDP**, i.e. a huge amount of GDP was “borrowed” from the future into the past AND is still being borrowed into the present. This debt, built up over decades and reflected in GDP numbers, is also reflected in the prices of all the assets that you can see on your Bloomberg screen.

At the end of the Autumn phase, there is a crash in debt-driven speculative bubbles

In a typical long wave, **debt builds up in the economy during the first three phases until an unsustainably high level is reached by the end of Autumn**. This precipitates a crash in the equity market, ushering in the Kondratieff Winter. **When excessive debt and misallocated capital has been purged to a sufficient extent, the cycle can**

begin again. That is free-market capitalism. **Correction, it WAS free market capitalism – in this long wave, the central planners have taken control!**

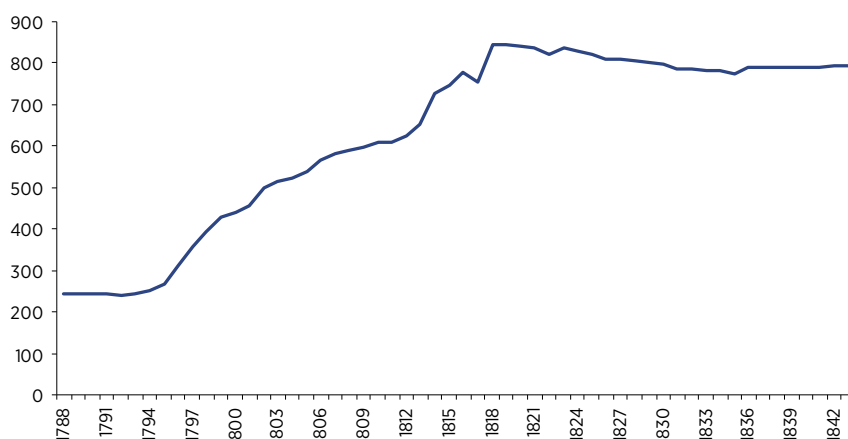
Lacking data on private sector debt before 1912

With regard to (total) debt levels, **there is a gap in the data (as mentioned earlier) with no figures for private sector, i.e. non-government, debt for the first two long waves and between 1897-1912 in the third.** The chart for the third long wave (K-3) on the next page is most relevant as it shows the classic reduction in debt in the final (Winter) phase of the long wave. A “bust” in asset bubbles (stock market and housing/real estate) leads to a sharp reversal in the “wealth effect” and the need for deleveraging across the private sector.

However, it's also worth looking at the first two, where government debt peaked during the middle of the long wave due to the costs of fighting “Peak” wars (see explanation of Summer phase below).

In the first long wave, the British government debt peaked several years after the conclusion of the **Napoleonic Wars (1799-1815).**

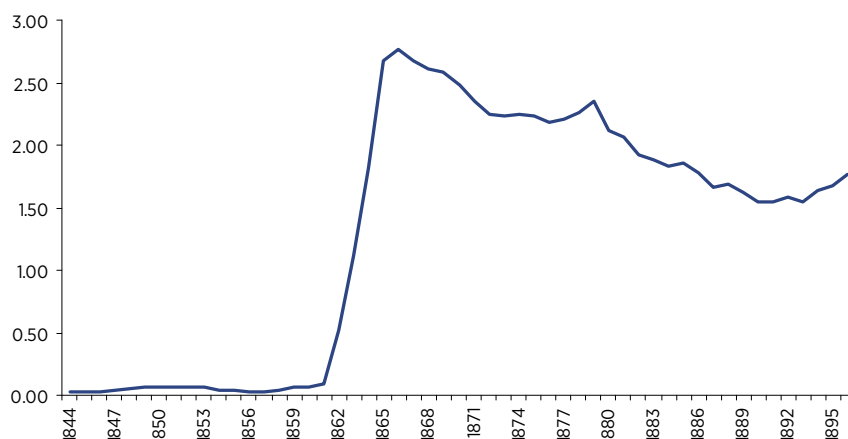
First long wave (K-1): debt in the economy (public sector only) in GBP millions



Source: publicspending.co.uk

In the second long wave, the US government de-leveraged substantially from the end of the **American Civil War (1861-65)**, which continued right through almost to the end of Winter.

Second long wave (K-2): debt in the economy (public sector only) in US\$ bn

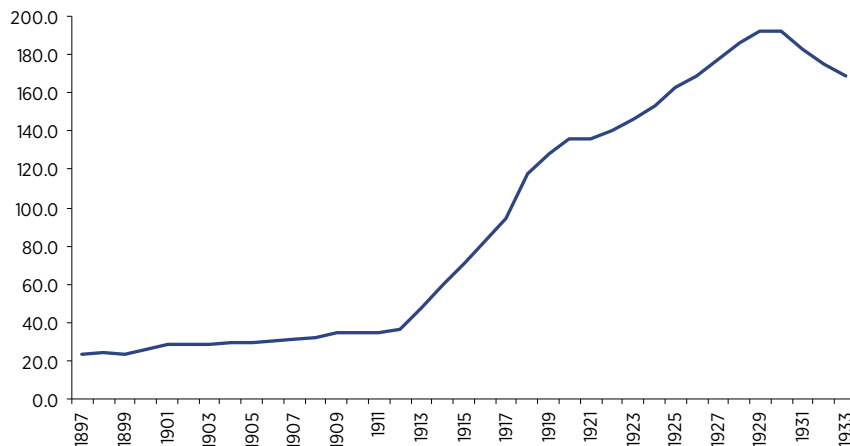


Source: usgovernmentdebt.com

Classic de-leveraging in K-3

The third long wave saw a “classic” de-leveraging during the final Winter phase (after the Crash of 1929). It might look modest, **but the debt reduction was equivalent to 26% of GDP:**

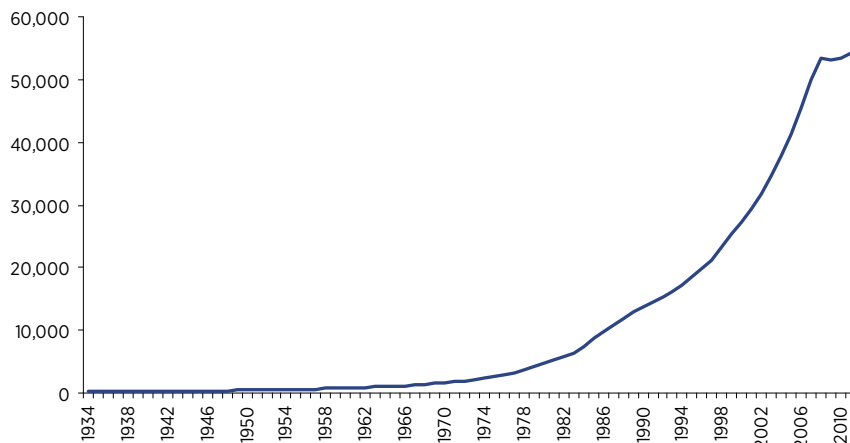
Third long wave (K-3): total debt in the economy in US\$ bn



Source: US Census

This is how the fourth long wave (1934 -) has panned out so far – once again a very different shape compared with the first three long waves.

Fourth long wave (K-4): total debt in the economy in US\$ bn



Source: US Census, Federal Reserve

K-4 looks different (again)....thanks to money creating policy makers

Like the earlier discussion regarding the price level/inflation, the current cycle appears to bear no relation to the earlier ones in terms of debt, although we only have the data for public debt in K-2 and K-3. However, just like the price level in K-4, the thrust of the K-Cycle is unfolding/will unfold if the trends are viewed in the correct context. Deflation can be measured in more than one form of money and **there is more than one way to extinguish debt.**

Credit junkies gone wild....

It's been obvious in recent years that whenever credit growth started to slow, or there was a full-blown recession/crisis, e.g. 2008, central banks (and governments) stepped in with “maestro-like” precision and **got all “the plates spinning again” with the provision of vast quantities of new debt/credit** and easy money policies.

There will be debt reduction....just in a different form

The method which is used to reduce this debt burden ultimately – **INFLATION THIS TIME** - is going to have a different impact on the performances of various asset classes.

Before we get to that, let's look at the four phases of a Kondratieff long wave.

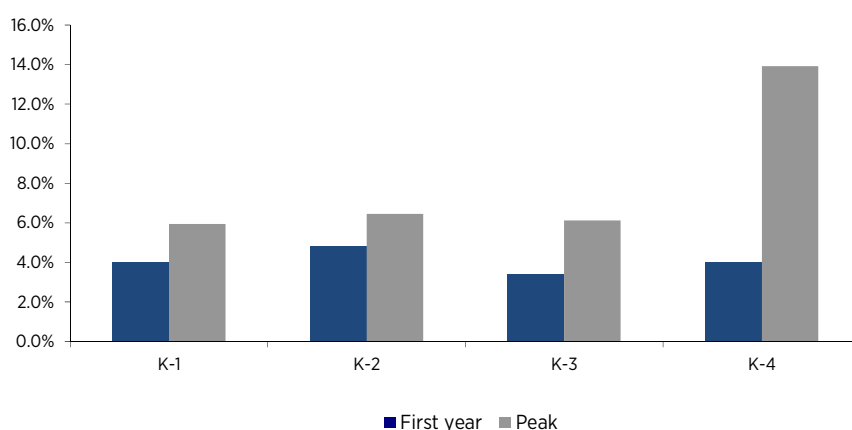
Spring

Conditions at the beginning of a long wave

Let's start with the **upswing of the long wave and the "Spring" phase**. At the beginning, debt has been reduced, savings rebuilt and capital is widely available at relatively low interest rates. These factors, together with low labour and raw material costs encourage entrepreneurs to invest with the prospect of high returns.

The table shows the long-term interest rate (average for the year) in the first year of each K-Cycle compared with the peak long-term rate during that long wave cycle:

Long term interest rate in first year of each long wave vs. peak interest rate



Source: Federal Reserve, Homer

Innovation driven investment spending

High savings and low interest rates stimulate growth in capital investment. The rising phase of the cycle is often driven by **major innovations** which were conceived during the downswing of the previous cycle, but really begin to positively impact economic growth during the upswing:

Major innovations which helped to drive each long wave

Long wave	Innovation
K-1	Steam engine, textile industry
K-2	Railways, steel industry
K-3	Electricity, Automobiles, Industrial chemistry
K-4	Electronics, petrochemicals, jet engine

Source: Seymour Pierce

Spring timings....

My **timings of the Spring phase** in each K-Cycle are shown in the next table:

Spring phases

Long wave	Years
K-1	1788-1798
K-2	1844-1860
K-3	1897-1911
K-4	1934-1966

Source: Seymour Pierce

Key characteristics of the Spring phase

In bullet points, here is a summary of the Spring phase:

- Economic recovery with notable strength in investment spending (capital goods);
- New innovations support the recovery;
- Unemployment falls and consumer spending increases;
- Growth is relatively consistent and recessions tend to be shallow and short-lived; and
- Wars generally have a positive impact on the global hegemon.

Trough wars...

Kondratieff noted that **there may be additional stimulation in the Spring phase provided by a “trough war”**. Such a war usually has popular support and benefits the global hegemon. For example, the US exited World War II with 45% of global industrial production. **Examples of trough wars** in the Spring phase are:

Trough wars in Kondratieff long waves

Long wave	War	Dates
K-1	Early Napoleonic Wars	1793-1805
K-2	Mexican-American War	1846-48
K-3	Spanish-American	1898
K-4	World War II	1939-45

Source: Wikipedia

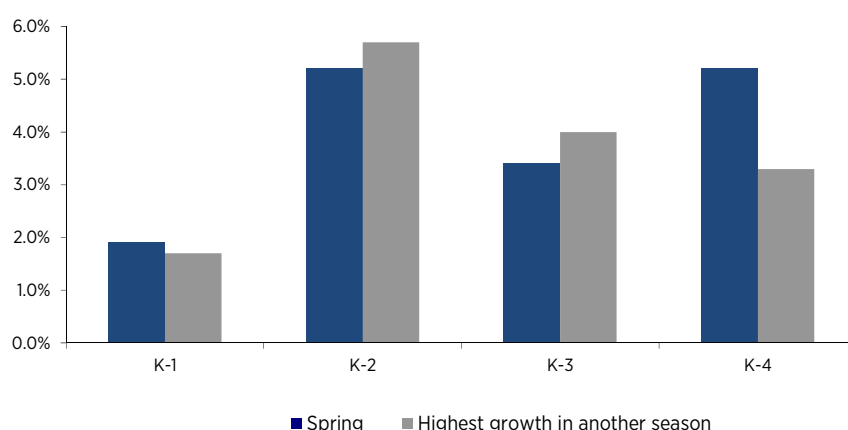
Categorising the Second World War

Analysts who argue that the current long wave began in 1948 point to the Korean War (1950-53) as the trough war in K-4. This leads to a problem with categorising World War II which, based on consensus dates for long waves, would have taken place in Winter of the previous K-Cycle. It is usually explained away, unsatisfactorily I think, as “Part 2” of an unresolved 1914-18 conflict. Given my belief that the start date for the current K-Cycle is 1934, **this makes the World War II a “trough” war in the Spring part of the K-4 upswing**. There is no doubt, either, that the World War II dramatically improved the economic power of the US, in absolute and relative terms, compared with the decimated nations of Europe and Asia.

Robust GDP growth seen in Spring

The Spring season **usually sees some of the highest average annual growth in real GDP across each cycle**. The table below shows the CAGR in real GDP during the Spring season of each cycle compared with the highest rate of growth in any of the other seasons during each cycle.

Real GDP growth in Spring versus highest growth in another season (CAGR)

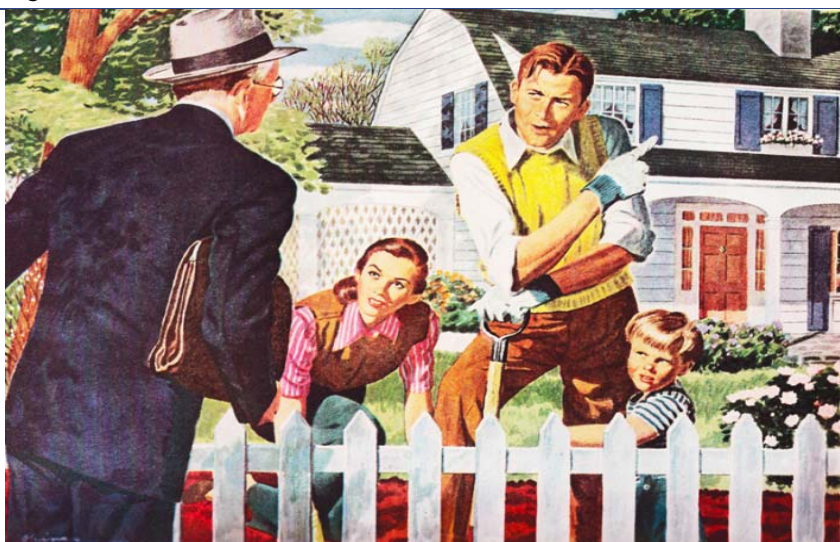


Source: British Economic Growth and the Business Cycle 1700-1850, Measuring Worth, Bureau of Economic Analysis

“As dissatisfied as I was, and as restless, I remember so well this feeling (we) had at the time that the world was going to be your oyster. You were going to make money, your kids were going to go to good schools, everything was possible... The future was rosy.”

The Fifties: A Women's Oral History, Brett Harvey

Living the dream in 1950s America



Source: Envisioning the American Dream

Performance of asset classes

Now let's consider which **asset classes should outperform and which underperform during the Spring phase** of a long wave – and compare that with the actual outcome.

Equities generally outperform

With the economy in a recovery/growth mode, equities should perform well. While we don't have data on equities for Spring in K-1 (1788-1798), they outperformed in the three subsequent cycles.

Performance of equities in Spring

Long wave	Dates	Summary	Outperform?
K-2	1844-1860	US equity market rose 17% during 1844-60 and 69% from 1844 to the 1852 peak	YES
K-3	1897-1911	DJIA rose from 30.5 in Aug 1896 to 81.2 in Dec 1911 (peak 99.7 in Jan 1906)	YES
K-4	1934-1966	DJIA rose from Jul 1932 trough of 41.2 to 785.7 in Dec 1966 (peak 995.2 in Feb 1966)	YES

Source: Goetzmann, Ibbotson & Peng, Yahoo Finance, Federal Reserve, Seymour Pierce

Bullish for commodities

Strong growth in investment is **bullish for commodity prices** and they have outperformed during the Spring phase of each of the four long waves.

Performance of commodities in Spring

Long wave	Dates	Summary	Outperform?
K-1	1788-1798	Silberling commodities index rose from 99 to 149 during 1791-98	YES
K-2	1844-1860	Warren & Pearson index of commodity prices rose from 79 to 123 during 1844-57	YES
K-3	1897-1911	BLS/Grilli & Yang commodity price indices rose 37% during 1897-1911	YES
K-4	1934-1966	G&Y/CRB commodity price indices rose 79% during 1934-1966 (peak +148% in 1946)	YES

Source: Silberling index, Warren & Pearson, BLS, Grilli & Yang, Reuters/CRB, Seymour Pierce

....and housing/real estate

Economic growth, high savings levels and low interest rates should all be positive for housing/real estate prices. While we don't have data for the first two cycles, real estate prices did well during K-3 and (especially) in K-4.

Performance of housing/real estate in Spring

Long wave	Dates	Summary	Outperform?
K-3	1897-1911	Case Shiller home price index rose almost 35% during 1897-1911	YES
K-4	1934-1966	Case Shiller home price index rose just over 270% during 1934-1966	YES

Source: Case Shiller, Seymour Pierce

Bearish for government bonds

Spring is generally characterised by a rising trend in interest rates, particularly as this phase progresses. This is **bearish for long-term government bonds** – with rising yields implying lower prices. Once again, the predictive ability of the long wave worked well for this asset class.

Performance of government bonds in Spring

Long wave	Dates	Summary	Underperform?
K-1	1788-1798	Long-term yields rose from 4.08% 5.94% during 1787-98 (trough 3.33% in 1792)	YES
K-2	1844-1860	Long-term yields rose from 4.85% to 5.57% (trough of 4.02% in 1853)	YES
K-3	1897-1911	Long-term yields rose from 3.39% to 3.93% during 1897-1911 (trough 3.24% in 1899)	YES
K-4	1934-1966	Long-term yields rose from 3.01% to 4.93% during 1939-66 (trough 2.02% in 1946)	YES

Source: Homer, Measuring Worth (Officer/Williamson), NBER

...and gold

With positive, but generally benign, inflation and positive real interest rates, **the gold price should do poorly in the Spring phase** – and this has been the case in each cycle:

Performance of gold in Spring

Long wave	Dates	Summary	Underperform?
K-1	1788-1798	Gold price was flat at £4.25/oz (in decimalised form) but lost c.22% in real terms	YES
K-2	1844-1860	Gold price was fixed at US\$20.67/oz., but lost 12% in real terms during 1844-60	YES
K-3	1897-1911	Gold price remained almost unchanged at US\$18.92-18.98/oz., but fell 13% in real terms	YES
K-4	1934-1966	Gold price remained unchanged at US\$35.00/oz versus 150% inflation	YES

Source: Measuring Worth (Officer/Williamson), World Gold Council

Summer

Rising inflation marks the transition from Spring to Summer

The catalyst for the transition from the Spring phase into the Summer is an **acceleration in inflation which is usually exacerbated by the costs/deficit spending of a “peak” war**. In the current long wave, for example, the Summer phase began in 1966. This coincided with the surge in the US Federal deficit, due to the escalation of the Vietnam War and LBJ’s “Great Society” welfare programmes.

Summer timings....

My timings of the Spring phase in each K-Cycle are shown in the next table:

Summer phases

Long wave	Years	Peak war
K-1	1799-1813	War of 1812
K-2	1861-1864	American Civil War
K-3	1912-1920	World War I
K-4	1967-1980	Vietnam War

Source: Seymour Pierce

Key characteristics of the Summer phase

In bullet points, here is a summary of the Summer phase:

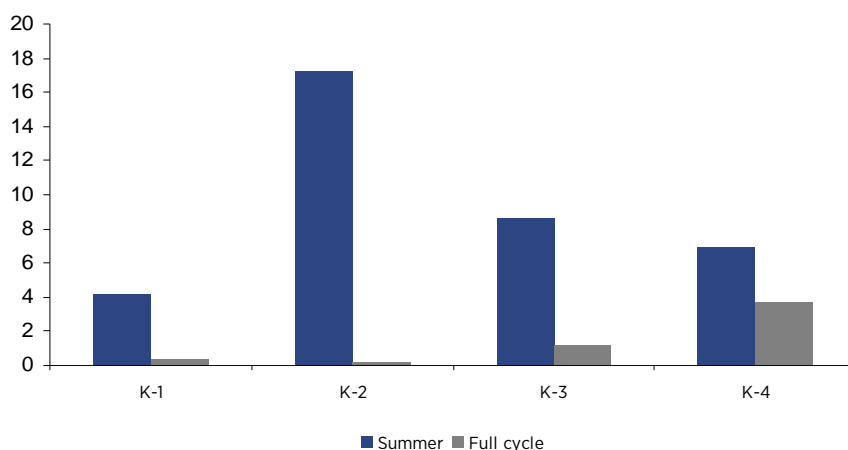
- **Accelerating inflation due to debt-driven spending/consumption and capacity constraints;**
- **A “Peak” war helps to ignite inflationary pressures in the economy via government deficit spending;**
- **Growth from new innovations begins to level out;**
- **Attitudes to work deteriorate (e.g. Luddites in 1811-12, labour disputes in the 1970s, etc.) and inefficiencies creep into the system;**

- Real (rather than nominal) economic growth begins to falter as Summer reaches its climax, as rising costs/interest rates adversely impact investment and consumption; and
- Interest rates move sharply higher, usually reaching a peak around the end of the Summer period.

High rates of inflation compared to other phases

The next chart highlights the inflation rate (in terms of CAGR) in Summer compared to the average rate of inflation across each long wave cycle: as whole.

Inflation rate in Summer compared to each long wave average (CPI %)



Source: ONS, Measuring Worth, Bureau of Labor Statistics

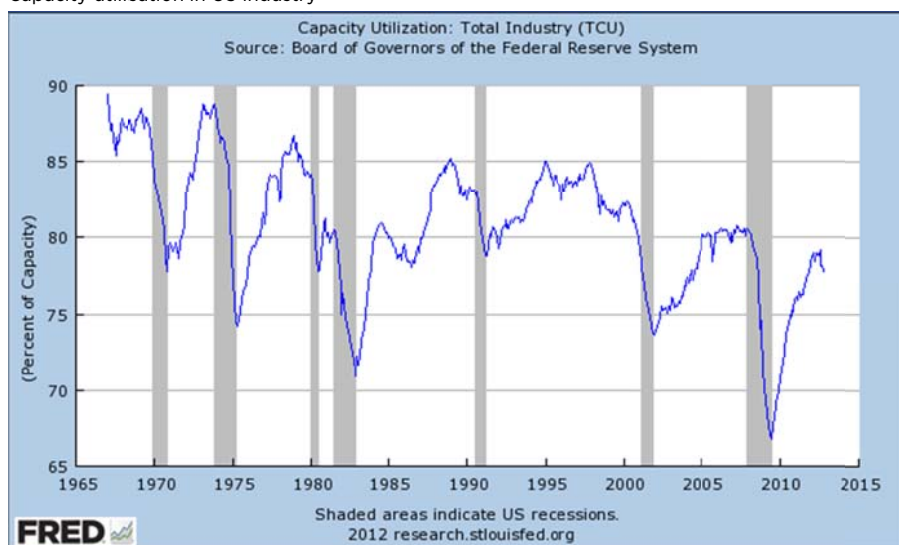
Ian Gordon (www.thelongwaveanalyst.com) describes the Summer phase as when:

“the economy reaches its fullness with inflationary abundance.”

Strong debt/credit growth reflected in prices of goods & services

In contrast to the Autumn phase (see below), **debt/credit growth in Summer is manifested in rising prices for goods and services, i.e. CPI inflation.** Contributing to the inflation is usually a high level of capacity utilisation. Look at the next chart showing capacity utilisation in the US economy since the late-1960s. Despite the recessions of 1969-70, 1973-75 and 1980, all of the highest readings for capacity utilisation occurred during the Summer phase of this long wave, i.e. 1966-1980.

Capacity utilisation in US industry



Source: Federal Reserve Bank of St Louis

Performance of asset classes

Now let's consider the performance of different asset classes during Summer phases.

Positive for gold

Clearly, the **inflationary character of Summer should be very positive for the gold price**. In the three out of the four cycles, this was clearly the case:

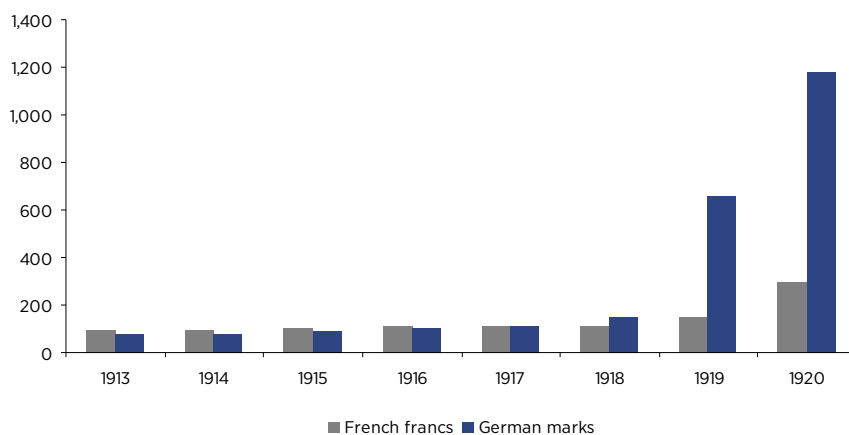
Performance of gold in Summer

Long wave	Dates	Summary	Outperform?
K-1	1799-1813	Gold price rose 36% from £4.25/oz to £5.76/oz during 1799-13	YES
K-2	1861-1864	Gold price rose from US\$20.67/oz. to US\$42.03/oz. during 1861-64	YES
K-3	1912-1920	Gold price rose from US\$18.98/oz. to US\$20.67/oz., a loss of about 100% in real terms	NO
K-4	1967-1980	Gold price rose from US\$35.00/oz to a peak of US\$850/oz. in Jan 1980	YES

Source: Measuring Worth (Officer/Williamson), World Gold Council

The **underperformance of gold in US dollar terms in K-3 (1912-20) requires explanation**. World War I (1914-18) decimated most European economies. Exchange rates of European nations fell sharply versus the dollar. Consequently, the **gold price surged in old French francs and German marks**. In French francs, the price rose from FFr98 to FFr294 during 1913-20 and, in German marks, from DM79 to DM1,181.

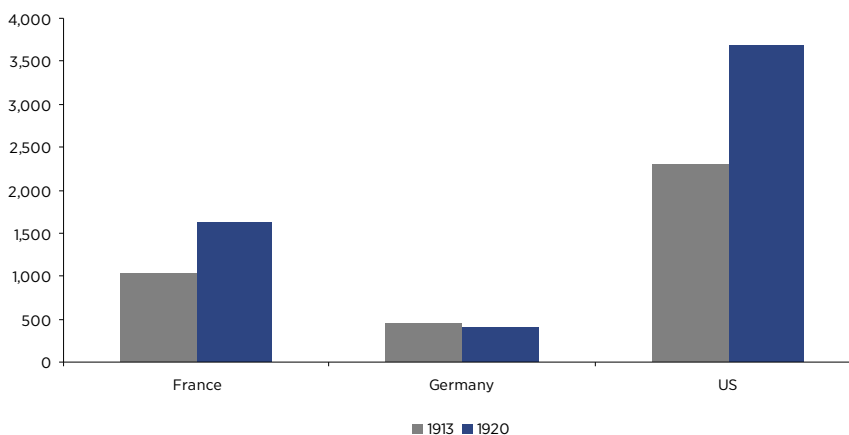
Gold price in old French francs and German marks (1913-1920)



Source: Measuring Worth

US official gold reserves rose substantially during this period, **providing far greater gold backing to the US dollar**.

France, Germany and US – change in official gold reserves 1913-20



Source: World Gold Council

This probably accounts for the **minimal rise in gold during this period when measured in US dollar terms.**

....and commodity prices

Commodities should also be expected to outperform during the inflationary Summer and this was the case in three out of the four K-Cycles.

Performance of commodities in Summer

Long wave		Summary	Outperform?
K-1	1799-1813	Silberling Commodities Index rose 24% from 149 to 185 during 1799-13	NO
K-2	1861-1864	Warren & Pearson index of commodity prices rose from 102 to 253 during 1861-64	YES
K-3	1912-1920	Grilli & Yang index of commodity prices rose from 21.9 to 42.0 during 1912-1920	YES
K-4	1967-1980	Index of commodity prices rose from 97.8 to 284.1 during 1968-1980	YES

Source: Silberling index, Warren & Pearson, BLS, Grilli & Yang, Reuters/CRB, Seymour Pierce

The **exception was K-1 when they underperformed, although an explanation is once again useful.** Commodity prices, represented by the Silberling Commodities Index, increased by 24%. However, this performance ranked third out of the four asset classes for which we have data in that period (the others being gold, government bonds and stocks) as can be seen in the next table. This accounts for the **“underperformance”** classification.

Performance of asset classes during Summer of the first long wave cycle (K-1)

Asset class	Summary	Predicted ?
Gold	The price rose 36% from £4.25/oz to £5.76/oz during 1798-13	YES
Commodities	Silberling Commodities Index rose 24% from 149 to 185 during 1798-13	NO
Stocks	British stocks fell 15% from 19.91 to 16.88 during 1800-13	YES
Govt. Bonds	Long-term yields FELL from 5.94% 4.92% (i.e 17%) – so bond prices rose - during 1798-13	NO

Source: xx

Housing/real estate outperformed in the two long waves we have data

Housing/real estate, another “real” asset, would also be expected to outperform in an inflationary environment. Here we only have data for K-3 and K-4 and the outperformance was in line with expectations.

Performance of housing/real estate in Summer

Long wave		Summary	Outperform ?
K-3	1912-1920	Case Shiller home price index rose 42% from 1912-20 (albeit down materially in real terms)	YES
K-4	1967-1980	House price index rose 162% from 1966-1980 and about 8% in real terms	YES

Source: Case Shiller, Seymour Pierce

I need to clarify the performance in K-3. While **US house prices rose a sizeable 42%, this was a material fall in real terms compared with the almost 111% inflation** during that period. However, this was the SECOND BEST performing of the five asset classes and accounts for its “outperformance” classification.

Performance of asset classes during Summer of the third long wave cycle (K-3)

Asset class	Summary	Predicted ?
Gold	Gold price rose from US\$18.98/oz. to US\$20.67/oz., a loss of about 100% in real terms	NO
Commodities	Grilli & Yang index of commodity prices rose from 21.9 to 42.0 during 1912-20	YES
Real Estate	Case Shiller home price index rose 42% from 1912-20 (albeit down materially in real terms)	YES
Stocks	DJIA fell from 81.7 in Jan 1912 to 71.9 in Dec 1920	YES
Govt. Bonds	Long-term yields rose from 3.93% to 6.12% during 1912-20 AND inflation was over 100%	YES

Source: xx

2012

Government bonds expected to underperform

Moving on to government bonds and **rising inflation is obviously negative for this asset class, especially when coupled with rising interest rates** - which would be expected during a period of rising inflation. It was surprising to me, therefore, that during the Summer phases of K-1 (1799-1813) and K-2 (1861-64) long term government bond yields actually DECLINED – leading at times to significantly negative real interest rates.

Performance of government bonds in Summer

Long wave		Summary	Underperform ?
K-1	1799-1813	Long-term yields fell from 5.94% to 4.92% (i.e 17%) during 1798-1813	NO
K-2	1861-1864	Long-term yields fell from 5.57% to 4.83% during 1861-64 versus 89% inflation	YES
K-3	1912-1920	Long-term yields rose from 3.93% to 6.12% during 1912-20 AND inflation was over 100%	YES
K-4	1967-1980	Long-term yields rose from 4.84% to 12.84% during 1967-80 (peak 15.32% in Sep 1981)	YES

Source: Homer, Measuring Worth (Officer/Williamson), NBER

In K-1, I would argue that total return, i.e. 17% decline in yields (from 5.94% to 4.92%) plus interest payments on British 3% Consols, led to **outperformance versus both Commodities (Siberling Index rose 24%) and Stocks (British shares fell 15%)... and even bettered gold (+36%)**.

In K-2, however, the capital appreciation (falling yields) plus the interest payments were **not enough to compensate for the 89% inflation in the general price level**. Given that gold, commodities and stocks all rose more than 100%, it would be inappropriate to classify any as underperformers, i.e. stocks outperformed versus the model's prediction of underperformance during Summer.

Performance of asset classes during Summer of the second long wave cycle (K-2)

Asset class	Summary	Predicted ?
Gold	The price rose from US\$20.67/oz. to US\$42.03/oz. during 1861-64	YES
Commodities	Warren & Pearson index of commodity prices rose from 102 to 253 during 1861-64	YES
Stocks	S&P Index rose 128% during 1861-64	NO
Govt. Bonds	Long-term yields fell from 5.57% to 4.83% during 1861-64 versus 89% inflation	YES

Source: xx

The **underperformance of government bonds during Summer K-3 and K-4 was more "conventional"** with yields rising substantially and, consequently, prices falling.

Bearish for equities

Equities would also be expected to underperform during Summer of a long wave as corporate margins are squeezed, PE ratios contract and capital flows into "real assets" like gold, commodities and real estate. This has been the case in three out of four Summer phases:

Performance of equities in Summer

Long wave		Summary	Underperform ?
K-1	1799-1813	British stocks fell 15% from 19.91 to 16.88 during 1800-13	YES
K-2	1861-1864	US equity market rose 125% during 1861-64	NO
K-3	1912-1920	DJIA fell from 81.7 in Jan 1912 to 71.9 in Dec 1920	YES
K-4	1967-1980	DJIA rose from 785.7 in Dec 1966 to 964.0 in Dec 1980 but compared with 154% inflation	YES

Source: Goetzmann, Ibbotson & Peng, Yahoo Finance, Federal Reserve, Seymour Pierce

The **exception was in K-2 during 1861-64 which covers most of the American Civil War**. The reason for the outperformance of the stock market during these years appears to be twofold:

- The **rise in industrial production** necessitated by the Civil War led to strong profitability for some industries and the stock market responded positively as it became clear that the Union/North would win; and
- The continuing **recovery from the “Panic of 1857”**. The latter was caused by the high profile failure of the Ohio Life Insurance and Trust Co., but also involved the over-expansion of the railway system and a fall in grain prices.

Autumn

Catalyst for the transition to Autumn is a peak in the price level or the rate of inflation

The major **catalysts for the phase transition from the inflationary Summer into the deflationary (or dis-inflationary) Autumn** are the peak in the price level or, in the current cycle, the peak in the RATE OF INFLATION which occurred in 1980. The peak in the price level/inflation is usually (broadly) coincident with a recession, brought on by rising interest rates. Not surprisingly, the gold price often reaches a peak around the same time.

Catalysts for the transition from Summer to Autumn

Long wave	Peak in price level/inflation	Recession	Peak in interest rates	Peak in gold price
K-1	Yes	Yes	No	No
K-2	Yes	Yes	Yes	Yes
K-3	Yes	Yes	Yes	No
K-4	Yes	Yes	Yes	Yes

Source: Seymour Pierce

Fed Chairman Paul Volcker famously crushed inflation in the current long wave

The transition from Summer to Autumn in the current cycle in 1980 was marked by Fed Chairman, Paul Volcker, **raising the Fed Funds rate to 20% in January 1980 in order to squeeze inflation out of the economy**. This precipitated a deep recession which began in the same month when the gold price also peaked at its (then) all-time high of US\$850/oz.

Autumn timings....

I will outline my case for the year 2000 being the end of Autumn in K-4 below, but here is my timing of the dates for Autumn in each cycle:

Autumn phases

Long wave	Years	Length
K-1	1814-1825	12 years
K-2	1865-1873	9 years
K-3	1921-1929	9 years
K-4	1981-2000	20 years

Source: Seymour Pierce

Longest Autumn phase was in the current cycle

We've been lucky (those over about 30 years of age), **having experienced the longest “feel good” Autumn phase in a long wave cycle** since the Industrial Revolution.

Key characteristics of the Autumn phase

In bullet points, here is a summary of the Autumn phase:

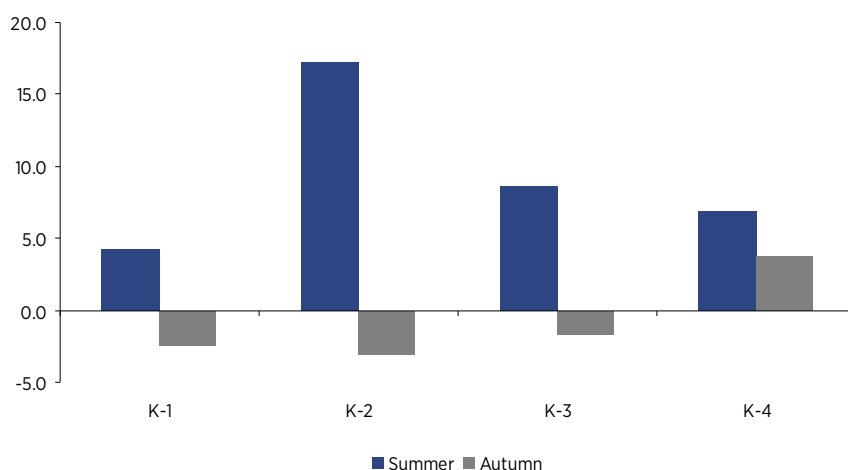
- **Economic recovery against a background of either deflation or low inflation (disinflation);**
- **This is the season of “easy credit!;**
- **High consumer spending and asset markets are sustained by rapid growth in debt in the private sector;**
- **Speculative bubbles develop in stocks, bonds and real estate;**

- Interest rates tend to be on a declining trend; and
- The debt-driven prosperity leads to a mistaken view that the “good times” will continue.

Post-Bretton Woods we have seen disinflation rather than deflation during Autumn

In the first three K-Cycles, when the world was operating on a gold (or gold exchange) standard most of the time (although it was usually suspended during major conflicts), the **Autumn phase saw the onset of deflation**. With the demise of Bretton Woods, the **Autumn phase (1981-2000) of the current cycle saw disinflation vis-à-vis Summer** as shown in the chart below:

K-4 has seen disinflation instead of deflation



ONS, Measuring Worth, Bureau of Labor Statistics

Economic growth punctuated by occasional recessions

Following the severe recession which is typical of the beginning of the Autumn phase, there is an economic recovery which is maintained for most of Autumn. That said, it is **usually punctuated by the occasional recession**, e.g. 1981-82 and 1990-91 in the current cycle.

Debt/credit growth is channelled into asset markets

A critical point about Autumn is that, with slack in the economy (lower capacity utilisation rates), the **vast majority of the debt/credit created during Autumn is channelled into ASSET PRICE INFLATION**, e.g. in stocks, bonds and real estate, rather than “traditional” inflation in the prices of goods and services as measured by the CPI.

Having your cake and eating it

Julian Snyder (who wrote the introduction to the English translation of Kondratieff’s “The Long Wave Cycle”) really captured the essence of Autumn in the following:

“this underlying slowdown reduces the forces of inflation and makes it possible for a while for people to have their cake and eat it too, that is, to **create purchasing power artificially without causing inflationary overheating**. The phenomenon is similar to stepping on the gas in your automobile when the car is going downhill; you get more speed without burning up quite as much energy. In economic terms, this slowing down provides the opportunity for financial liquidity to build up somewhat and pour into the few remaining healthy areas of the economy or into wild speculative ventures.”

Unfortunately, the longer the Autumn phase unfolds, the more it becomes dependent on an unsustainable expansion of debt **and the associated rise in asset prices (“wealth effect”, etc)**. Here is Julian Snyder again:

“Because the rate of inflation is declining, people begin to think that this problem has been solved and because they still have money in their pockets, they become suddenly optimistic and then finally euphoric.”

Feeling good in Autumn

The latter **part of Autumn is a very much a “feel good” part of the long cycle**. The low inflation and high asset prices are generally accompanied by an improvement in relations between workers and management and a loosening of moral constraints. The “feel good” period of the fourth cycle has not been christened, but those during the first three cycles were:

“Feel good” Autumn periods

Long wave cycle	Known as	Years
K-1	"The Era of Good Feeling"	1815-23
K-2	"The Gilded Age"	1867-72
K-3	"The Roaring 20s"	1922-29
K-4	Greed is good !	Mid/late-1980s-1990s

Source: Seymour Pierce

The euphoria of Autumn manifests in speculative asset bubbles. It appears that these euphoric times lead to a **“numbing of the senses”, with most people believing that the good times will carry on indefinitely**. It reminds me of several quotes from the Wall Street movie:

“It’s all about bucks, kid. The rest is just conversation.”

“The point is, ladies and gentlemen, that greed, for lack of a better word, is good.”

“This stock is going to Pluto.”

The tag line to the movie reminded us that:

“Every dream has a price”

The sage-like character, Lou Mannheim (“Stick with the fundamentals”) cautioned Charlie Sheen’s character:

“Kid, you’re on a roll. Enjoy it while it lasts, because it never does.”

The popping of these bubbles ushers in Winter (see below).

Performance of asset classes

Now let’s consider the performance of different asset classes during the Autumn phase.

Bullish for equities

Declining interest rates and rising consumption supported by debt and rising prices for financial assets **led to equities outperforming in three of the four long waves**.

Performance of equities in Autumn

Long wave	Summary		Outperform ?
K-1	1814-1825	British stocks rose from 16.88 to 77.76 during 1814-25 (trough 13.93 in 1816)	YES
K-2	1865-1873	US equity market was basically flat during 1865-72, prior to the Panic of 1873	NO
K-3	1921-1929	DJIA rose from 71.9 in Dec 1920 to 248.5 in Dec 1929 (peak 381.2 in Sep 1929)	YES
K-4	1981-2000	DJIA rose from 964.0 in Dec 1980 to 10,788.0 in Dec 2000 (peak 11,723 in Jan 2000)	YES

Source: Goetzmann, Ibbotson & Peng, Yahoo Finance, Federal Reserve, Seymour Pierce

The **exception was K-2** when the equity market traded sideways across the Summer phase. This seems to have reflected exhaustion following the strength during the American Civil War.

....and government bonds

The decline in interest rates during Autumn should be **very bullish for government bonds**, so it’s no surprise that they outperformed in each cycle.

Performance of government bonds in Autumn

Long wave	Summary		Outperform ?
K-1	1814-1825	Long-term yields fell from 4.92% to 3.54% during 1813-25 (trough 3.30% in 1824)	YES
K-2	1865-1873	Long-term yields almost unchanged, from 5.54% to 5.55% during 1865-73 versus deflation of 27%	YES
K-3	1921-1929	Long-term yields fell from 6.12% to 4.55% during 1920-1928	YES
K-4	1981-2000	Long-term yields rose from a peak of 15.32% in Sep 1981 to 5.24% in Dec 2000	YES

Source: Homer, Measuring Worth (Officer/Williamson), NBER

Housing/real estate also does well

The **same is true for housing/real estate** although we only have data for the third and fourth long waves:

Performance of housing/real estate in Autumn

Long wave	Summary		Outperform ?
K-3	1921-1929	The famous Florida real estate boom from 1920-1926	YES
K-4	1981-2000	Case Shiller home price index rose 121% from 1981-2000 and 31% in real terms	YES

Source: Case Shiller, Seymour Pierce

The outperformance during K-3 requires explanation. In K-3, house prices across the United States as a whole were basically unchanged during the Autumn phase from 1921-29. However, there was a **huge boom in real estate construction** – this comment from Ian Gordon:

“the real estate bubble of the 1920s, which was centred on the development of suburbs outside the cities and the building of skyscrapers close to the city centres.”

Florida real estate bubble

And there was a real estate MANIA during that period, even if it was narrowly focused, i.e. the **famous Florida real estate bubble**. Here is Wikipedia:

“The Florida land boom of the 1920s was Florida’s first real estate bubble, which burst in 1925, leaving behind entire new cities and the remains of failed development projects...The story includes many parallels to the modern real estate boom, including the forces of outside speculators, easy credit access for buyers, and rapidly-appreciating property values... Miami had an image as a tropical paradise and outside investors across the United States began taking an interest in Miami real estate. Due in part to the publicity talents of audacious developers like Carl G. Fisher of Miami Beach, famous for purchasing a huge lighted billboard in New York’s Times Square proclaiming “It’s June In Miami.”

This is from Frederick Lewis Allen’s “Only Yesterday”:

“The stories of prodigious profits made in Florida land were sufficient bait. A lot in the business center of Miami Beach had sold for \$800 in the early days of the development and had resold for \$150,000 in 1924. For a strip of land in Palm Beach a New York lawyer had been offered \$240,000 some eight or ten years before the boom; in 1923 he finally accepted \$800,000 for it; the next year the strip of land was broken up into building lots and disposed of at an aggregate price of \$1,500,000.”

Commodity prices underperform

Deflation, or lower rates of inflation, are obviously **bad news for commodity prices** and this asset class underperformed in the Autumn of each long cycle.

Performance of commodities in Autumn

Long wave		Summary	Underperform ?
K-1	1814-1825	Silberling Commodities Index fell from 185 to 118 during 1813-25 (trough 106 in 1824)	YES
K-2	1865-1873	W&P/BLS commodity price indices fell 44% during 1865-71	YES
K-3	1921-1929	Grilli & Yang index of commodity prices fell from 42.0 to 23.3 during 1921-29	YES
K-4	1981-2000	CRB index of commodity prices fell 2.1% during 1981-2000	YES

Source: Silberling, Warren & Pearson, Bureau of Labor Statistics, Grilli & Yang, CRB

As does gold...

After the Summer peak, deflation/lower inflation lead to gold's **underperformance**.

Performance of gold in Autumn

Long wave		Summary	Underperform ?
K-1	1814-1825	Gold price fell from £5.76/oz to £4.24/oz during 1814-25	YES
K-2	1865-1873	Gold price fell from US\$42.03/oz to US\$23.52/oz during 1865-73	YES
K-3	1921-1929	Gold price remained almost unchanged between US\$20.58-20.69/oz	YES
K-4	1981-2000	Gold price fell from peak of US\$850/oz. to a trough of US\$252.80/oz. in Jul 1999	YES

Source: Measuring Worth (Officer/Williamson), World Gold Council

Winter

Catalyst for the transition to Winter is a stock market crash

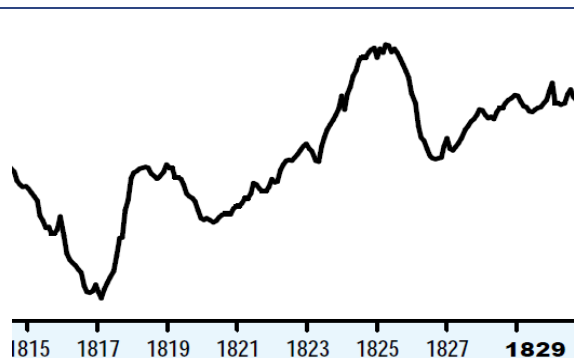
In the transition to Winter, the greed seen in the asset bubbles of Autumn is replaced by fear. The **"wealth effect" moves into reverse, confidence evaporates, consumption and investment decline and companies lay off workers**. With the economy overwhelmed by debt and asset bubbles, the catalyst for the transition into the Winter phase has been a **crash in the stock market in each cycle**:

K-1 - the Panic of 1825

Collapse in Latin American investments started the crisis

The London stock market crashed in 1825 after the Bank of England raised interest rates. Hardest hit were **speculative investments in Latin America**, primarily shares in mining companies and the bonds of fledgling Latin American nations.

London stock price index and the Panic of 1825



Source: Federal Reserve Bank of St Louis from quotes for 50 companies in the "Course of the Exchange"

The knock-on included the **failure of nearly 70 banks**. The best story from the 1825 crisis was how investors were conned into buying bonds of a fictional Central American "country", the Principality of Poyais. Claiming to have been made head of state, Gregor MacGregor, a Scottish soldier, adventurer and speculator, sold its "sovereign" bonds to investors. Almost a preface to the "Dot.cons" nearly 200 years later?

Jay Cooke & Co. and the Northern Pacific

K-2 – the Panic of 1873

The **collapse of the Philadelphia banking house, Jay Cooke & Co., which over-extended itself in financing the Northern Pacific Railroad**, led to the “Panic of 1873”. This caused a series of bank failures and a stock market crash after which the New York Stock Exchange was shut for ten days. These events ushered in what is now known as the “Long Depression” (it was known as the “Great Depression” until the 1930s). While the failure of Jay Cooke is generally viewed as the catalyst for the “Panic of 1873”, the background was more complex and international in scope.

Offices of Jay Cooke & Co. on Third street, Philadelphia



Source: The century illustrated magazine

....although it actually began in Europe

Firstly, after the end of the Franco-Prussian War in 1871, Otto Von Bismarck began the demonetisation of silver and its replacement with a gold standard. Reparations, which had been paid by France in gold, provided new capital which fuelled an investment boom and a corresponding boom in the stock markets of the newly unified Germany and Austria. The **bursting of this bubble began with the crash of the Vienna Stock Exchange in May 1873** and knock-on bank failures across Europe.

Secondly, the problems in Europe **curtailed the flow of capital across the Atlantic**, halting the already excessive investment in railroads and industrial infrastructure. Wikipedia:

“The American Civil War was followed by a boom in railroad construction. 33,000 miles (53,000 km) of new track were laid across the country between 1868 and 1873. Much of the craze in railroad investment was driven by government land grants and subsidies to the railroads...A **large infusion of cash from speculators caused abnormal growth in the industry as well as overbuilding of docks, factories and ancillary facilities**...By November 1873 some 55 of the nation's railroads had failed, with another 60 going bankrupt by the first anniversary of the crisis.”

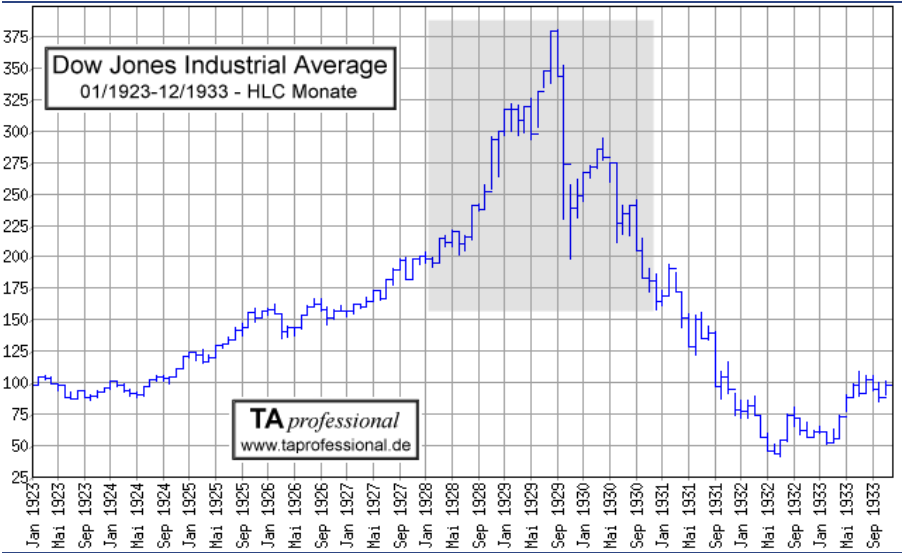
Demonetisation of silver

Thirdly, lower silver prices had already been having a negative effect on the US where much of the world’s silver was being mined at the time. The US Coinage Act of 1873 put the US on a de facto gold standard and a **reduction in US money supply led to a rise in interest rates in the run-up to the crisis.**

K-3 – Crash of 1929

I think the chart below says it all:

Crash of 1929 – Dow Jones Industrial Average 1923-33



Source: TA Professional

From John Steinbeck’s “**The Grapes of Wrath**” which was set in the Great Depression era:

“The bank - the monster has to have profits all the time. It can’t wait. It’ll die.. When the monster stops growing, it dies. It can’t stay one size.”

Winter timings....

I will outline **my case for the year 2000 being the end of Autumn in K-4 below**, but here is my timing of the dates for Winter in each cycle:

Winter phases

Long wave	Years
K-1	1826-1843
K-2	1874-1896
K-3	1930-1933
K-4	2001-

Source: Seymour Pierce

Before we discuss the transition from Autumn to Winter in the current K-Cycle, let’s review the **key themes of a typical Kondratieff Winter and how asset prices have performed during the first three cycles.** The most important themes, which need emphasizing because they are critical to the rest of this report, are:

- **DEFLATION in prices; and**
- **DEBT REDUCTION.**

Key characteristics of the Winter phase

In bullet points, here is a summary of Winter:

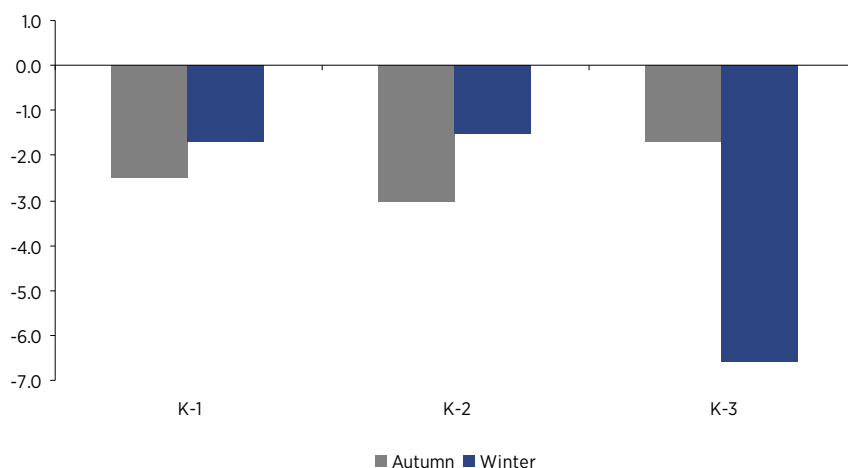
- **The economy is finally overwhelmed by excessive debt and speculation;**

- Prices, employment, output and investment all fall sharply as the economy goes into depression;
- Poor management and bad financial decisions which remained undetected during the boom in asset prices are exposed;
- Credit markets seize up and there are widespread bank failures; and
- Debt is reduced, usually through a mixture of bankruptcies and deleveraging (that's how it used to work before the advent of unlimited credit creation).

Deflation in Winter in the first three long waves

In the first three long waves, when the world was operating on a gold standard most of the time and without the ability of massive offsetting monetary stimulus, the **deflation seen in Autumn continued during Winter**:

First three long waves: deflation in Autumn continues in Winter (CPI %)



Source: ONS, Measuring Worth, Bureau of Labor Statistics

Here is Ian Gordon again, capturing the essence of Winter:

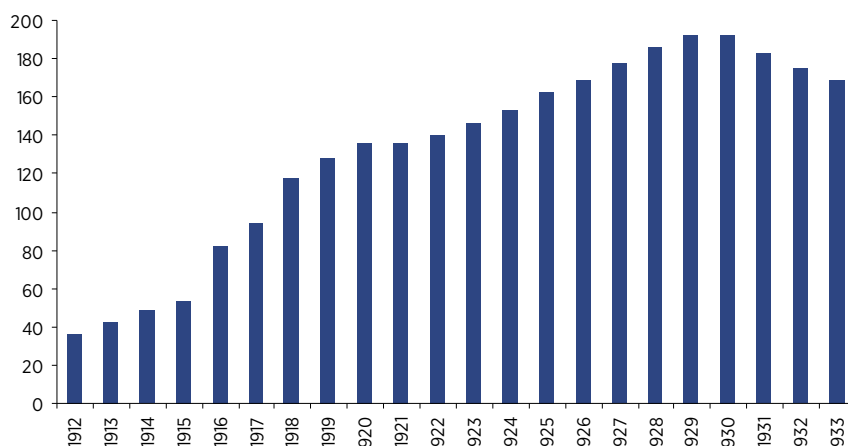
“In winter, the economy dies. It dies because it is overcome by too much debt.”

Winter purges the system

Painful as it is, the **Kondratieff Winter serves a VITAL purpose, purging excess debt, misallocated capital and over-consumption from the economy.**

The Great Depression was a classic and severe example – a short (4 years) but very sharp shock. The chart below shows the **sharp rise in total debt during 1916-18 (after the US entered World War I, the continuing rise during the “Roaring 20s” followed by the decline after the crash.**

Total debt in US economy 1912-1933 (US\$ bn)



Source: US Census, Federal Reserve

The US\$28.3bn reduction in debt during 1930-33 was **equivalent to a massive 26% of nominal GDP in 1930. In today's terms, that would be equivalent to a c.US\$4 trn debt reduction.**

Performance of asset classes in Winter

Now let's consider the performance of different asset classes during the Winter phase of the first three long waves.

Equities underperformed in each one

With a crash in stock markets ushering in each K-Winter, it's **not surprising that equities underperformed** during each of the first three cycles:

Performance of equities in Winter

Long wave	Dates	Summary	Underperform?
K-1	1826-1843	British stocks fell from 77.76 to 17.38 during 1825-43 (trough 15.33 in 1841)	YES
K-2	1874-1896	S&P fell 22% during 1873-76, further sharp falls during 1881-84 and 1892-96	YES
K-3	1930-1933	DJIA fell from 248.5 in Dec 1929 to a trough of 41.2 in Jul 1932	YES

Source: Goetzmann, Ibbotson & Peng, Yahoo Finance, Federal Reserve, Seymour Pierce

....as did commodities

With deflation and widespread economic hardship, **nor is it surprising that commodities underperformed** on each occasion either:

Performance of commodities in Winter

Long wave	Dates	Summary	Underperform?
K-1	1826-1843	Silberling Commodities Index fell from 118 to 86 during 1825-43	YES
K-2	1874-1896	BLS index of commodity prices fell 44% during 1873-96 from 83.7 to 46.5	YES
K-3	1930-1933	Grilli & Yang index of commodity prices fell from 23.3 to 12.6 during 1930-33	YES

Source: Silberling index, Warren & Pearson, BLS, Grilli & Yang, Reuters/CRB, seymour Pierce

We only have data for K-3 in housing/real estate

After experiencing a bubble during the Autumn phase, **real estate/housing should underperform in Winter**. There is a slight problem with real estate (housing) since we only have data for K-3. Even though the Case-Shiller Home Price Index fell 24% during 1929-33, it was flat in real terms. It was the third best performing of the five asset classes during the K-3 Winter – hence I've categorised its performance as neutral.

Performance of housing/real estate in Winter

Long wave	Dates	Summary	Underperform?
K-3	1930-1933	Case Shiller home price index fell 24% from 1929-1933, but was flat in real terms	NEUTRAL

Source: Case Shiller, Seymour Pierce

Government bonds outperformed

Crashing stock markets and depressions, characteristic of Winter, lead to a **FLIGHT TO SAFETY**. At the same time, falling prices for goods and services increase the relative value of (a nation's) money and "near money", like government bonds, IF THE GOVERNMENT IS PERCEIVED TO BE A GOOD CREDIT RISK. These factors, with the further benefit of falling interest rates, have led to government bonds outperforming in the Winter phase of each of the first three cycles:

Performance of government bonds in Winter

Long wave	Dates	Summary	Outperform?
K-1	1826-1843	Long-term yields fell from 3.54% to 3.17% during 1825-43 (peak 3.79% in 1826)	YES
K-2	1874-1896	Long-term yields fell from 5.55% to 3.46% during 1874-95	YES
K-3	1930-1933	Long-term yields fell from 4.73% in 1929 to 4.49% in 1933 versus 24% deflation in 1930-33	YES

Source: Homer, Measuring Worth (Officer/Williamson), NBER

Gold - the ultimate safe haven currency - also outperformed in all three, which shouldn't be a surprise either.

Performance of gold in Winter

Long wave	Dates	Summary	Outperform?
K-1	1826-1843	Gold price was flat at £4.24/oz (in decimalised form) but gained c.26% in real terms	YES
K-2	1874-1896	Gold price fell from US\$22.99/oz to US\$20.67/oz but gained 16% in real terms	YES
K-3	1930-1933	Gold price pegged but revalued upwards by FDR from US\$20.67/oz to US\$35.00/oz in 1933	YES

Source: Measuring Worth (Officer/Williamson), World Gold Council

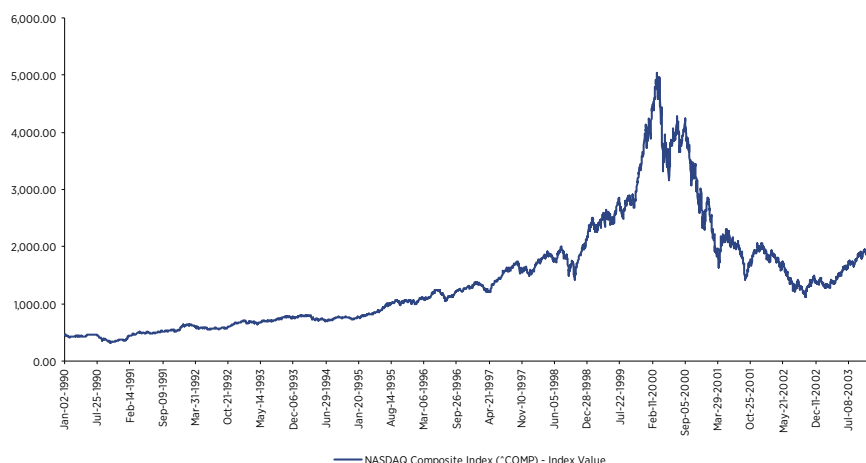
Winter phase of the current long wave

Part 1 – 2000-2012

NASDAQ crash ushered in the current Winter

The **catalyst for the transition into Winter in this cycle was a crash in the equity market as in earlier cycles**. This time it centred (only too memorably) on the collapse of TMT stocks (Technology, Media and Telecommunications) in 2000, which is best illustrated by the **NASDAQ** chart:

NASDAQ Composite 1990-2003

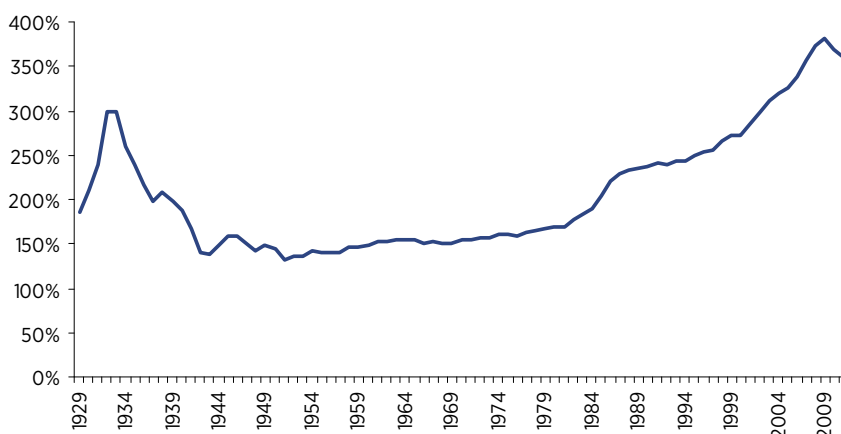


Source: Capital IQ

US debt/GDP in 2000 matched Great Depression peak

The TMT-driven stock market crash in March 2000 (and subsequent bankruptcies like Global Crossing, Worldcom, Enron, etc) would **ordinarily have brought on a debt deflation characteristic of a Kondratieff Winter**. Indeed, debt/GDP in the US economy in 2000 was c.270% - which was in line with the peak debt/GDP during the last K-Winter, i.e. in the Great Depression. Now we've gone far higher – with debt/GDP currently

US debt/GDP 1929-2012



Source: US Census, Federal Reserve, Bureau of Economic Analysis

From one bubble to another

This was when the **Greenspan Fed stepped in, defying economic gravity and re-levitating the US economic bubble**, with real estate at the leading edge. The bubble in real estate began to burst in the first half of 2007 and culminated with the crash of Lehman Brothers in September 2008.

Post-NASDAQ crash liquidity tsunami

However, it wasn't just house prices that were rising in the years running up to the Lehman collapse. This was the beginning of the liquidity tsunami and, **from 2000 to the crash of Lehman in 2008 was an unusual period when (following the low in equity markets), all five major asset five classes - stocks, government bonds, gold, commodities, real estate (until 2006 anyway) and commodities were in bull markets** for most of that period. Even art and collectibles and fine wine were in bull markets. Normally, some asset prices are rising while others are falling.

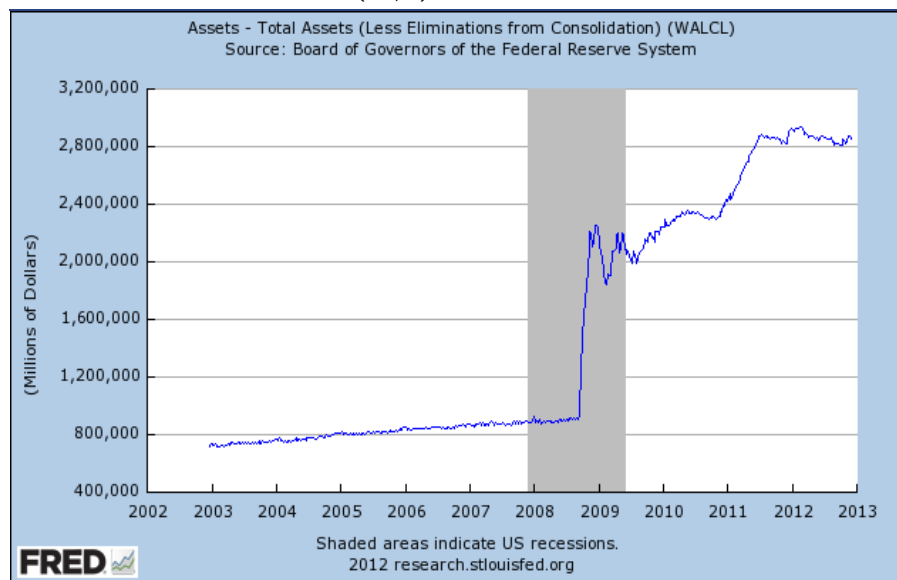
Monetary policy goes more extreme

Bernanke followed Greenspan's lead, but has been **forced to resort to more extreme monetary policies to ward off even more powerful deflationary forces since 2008.**

How to solve a debt crisis

This has led to the **perverse policy of trying to solve a debt crisis with more debt.** Since the beginning of 2000 the total debt in the US economy has more than doubled from US\$25.4 trillion to US\$54.6 trillion. Assets (i.e. debt) on the Fed's balance sheet have risen from less than US\$800bn to more than US\$2.8 trillion - and QE3 has barely started.

Balance Sheet of the Federal Reserve (US\$m)



Source: Federal Reserve Bank of St Louis

"Mailman" Bernanke – he's delivering

But if we remember Bernanke's famous "helicopter" speech "Deflation – making sure it doesn't happen here" from November 2002 (and other similar ones), he is **simply delivering on what he said he would do, i.e. avoid deflation at all costs.** So we will not see a debt deflation at the end of this long wave since:

- Central bankers simply refuse to permit it **UNDER ANY CIRCUMSTANCES**; and
- We are already so far past the point of no return in terms of debt, derivatives, counterparty risk across the banking system, budget deficits, high unemployment, welfare entitlements, etc, that permitting debt deflation would very rapidly bring on **SYSTEMIC FAILURE.**

Deflation is impossible if enough money is created

So what's really happening? The first thing to understand is that if enough new money is created then deflation becomes impossible. Julian Snyder, writing in 1993, gets right to the heart of what's happening in this Kondratieff Winter:

"Most previous studies of the long wave have assumed that the downswing phase would be accompanied by price deflation, since, in fact, this has been what happened in each instance over the past 200 years. The fact that prices on balance have not fallen has led many to doubt the long wave was repeating.

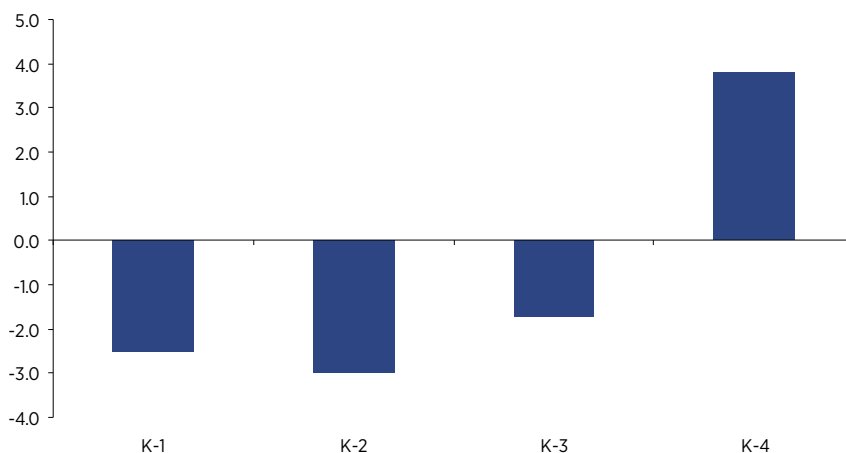
These people were overlooking the fact, as previously mentioned, that prices are a direct reflection of man's power to create nominal money. Thus, whatever the condition of the economy, the more money you create, the more prices will rise."

Collapse of Bretton Woods was pivotal

The **fundamental difference between the current long wave and previous cycle was the demise of Bretton Woods in 1971**, which opened the door to unlimited credit creation that we are seeing today.

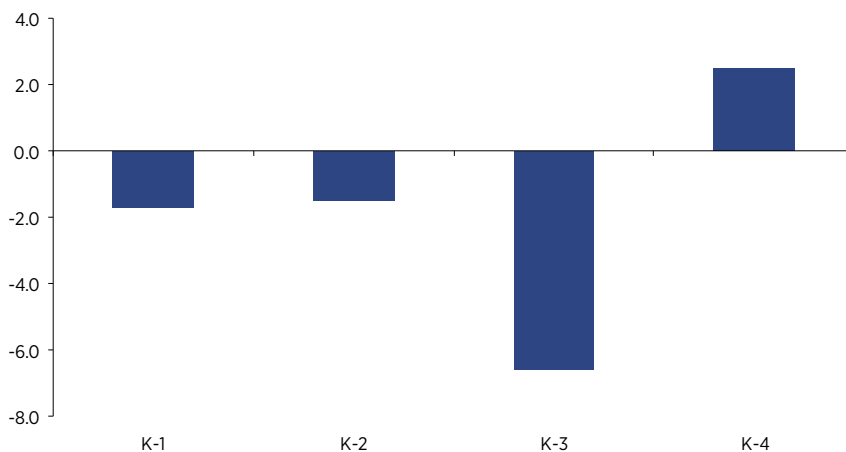
It has had a **major impact across the Autumn and Winter phases of the current cycle (K-4)**. The next two charts compare the CAGR in the CPI for the Autumn (1981-2000) and Winter (2000-) phases versus the three earlier cycles. The uplift to inflation, or swing from deflation to inflation, is startlingly clear:

Autumn phase: CAGR in CPI – fourth long wave compared to first three (%)



Source: ONS, Measuring Worth, Bureau of Labor Statistics

Winter phase: CAGR in CPI – fourth long wave compared to first three (%)

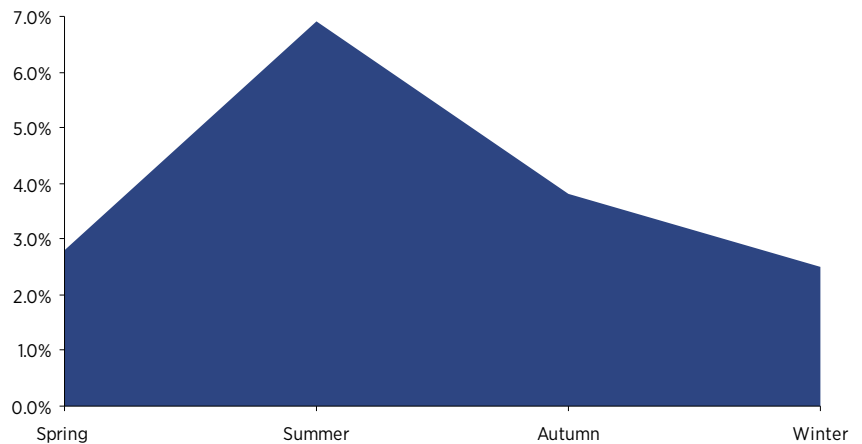


Source: ONS, Measuring Worth, Bureau of Labor Statistics

Price changes shifted to the first derivative

My thesis is that in the downswing part of the current cycle, i.e. Autumn and Winter (so far), the **decline in consumer prices has shifted from the absolute level typical in previous cycles to the FIRST DERIVATIVE in this one, i.e. from a decline in the absolute level of prices to a decline in the RATE OF INFLATION**. The chart below shows the annualised rate of inflation since the current cycle began in 1934:

CAGR in inflation during each phase of the current long wave (K-4)

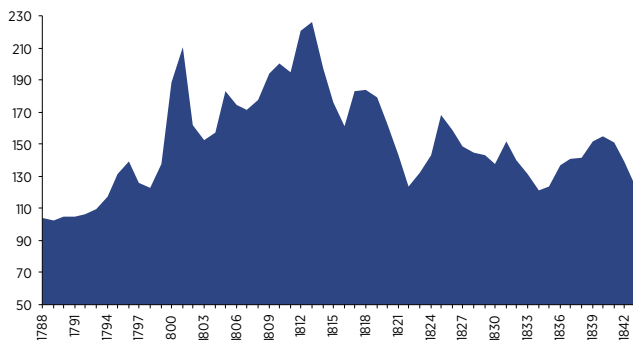


Source: Bureau of Labor Statistics

Long wave trends become apparent

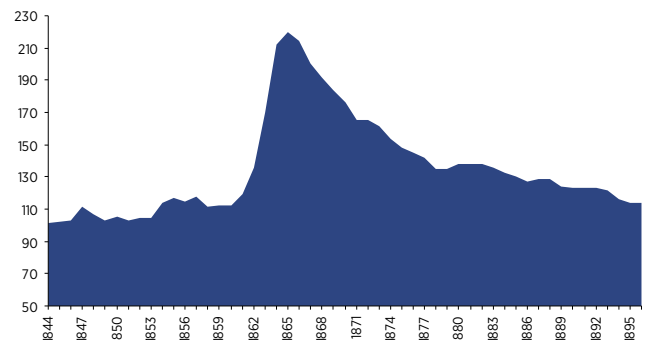
Now you can see how the Kondratieff long wave is still in operation as the shape of the chart is **very similar to the charts of the absolute price level in earlier long waves**, especially the first two:

First long wave: consumer price index 1788-1843 (1787=100)



Source: ONS

Second long wave: consumer price index 1844-1896 (1843=100)



Source: Measuring Worth

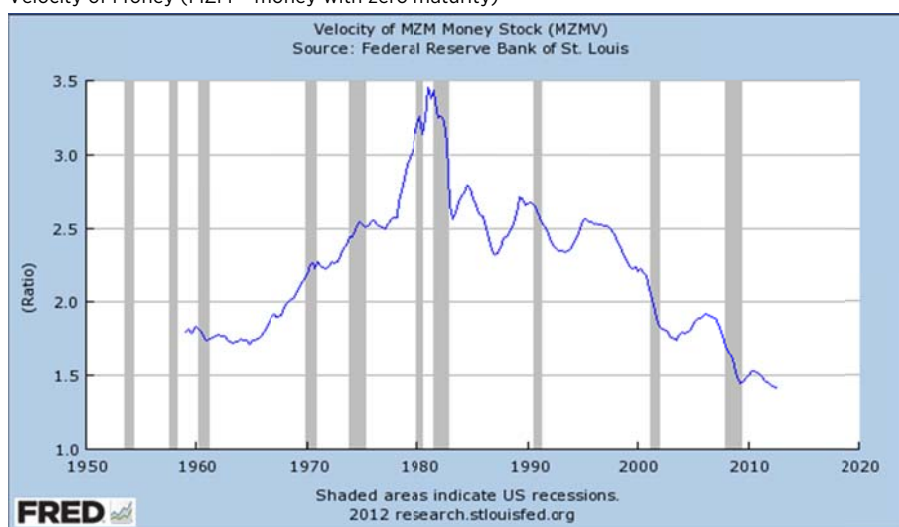
All that's happened is that, thanks to the collapse of Bretton Woods and central bank "activism" on a massive scale, the **"monetary train" JUMPED THE TRACKS to the first derivative.**

But that's only the story so far....because **I think it's going to jump the tracks again as policy makers print so much money that inflation picks up as confidence in the purchasing power of currencies evaporates.**

Also seen in velocity of money

Meanwhile, there is another way to strip out the effects of excessive monetary creation and **see the Kondratieff long wave in operation and that is via the velocity of money.** Look at the chart below of the velocity of money in the US since 1959. Please note this is for the MZM aggregate, i.e. money with zero maturity (liquid money: M2 - time deposits + money market funds). You can see the peak during 1980-81 – precisely at the end of the Kondratieff upswing (Summer) – and the almost continuous decline since:

Velocity of Money (MZM – money with zero maturity)



Source: Seymour Pierce Ltd

This gives another insight into how the **mechanics of the long wave are still playing out** in the current cycle with unlimited credit. I'll return to the subject of money velocity later, but let's concentrate on deflation and debt reduction.

Deflation and debt reduction will take on different forms from previous long waves

Turning deflation into inflation

The deflationary tendency is being overwhelmed by the sheer extent of monetary creation, but **is still there if you know where to look! Debt reduction will also follow and, just like deflation, it will be in a different form** from previous cycles.

Knowing that Kondratieff Winters are deflationary, but recognising back in 2007 that central banks would try to inflate their way out of the coming crisis, was a conundrum. By siding with an inflationary outcome, rather than a deflationary outcome, it seemed that I was arguing that this time is different – usually a dangerous stance in financial markets. **How could what is normally a deflationary process be inflationary?**

I realised that I'd already solved it. The "Gold War" report that I wrote in 2007 was sub-titled with the famous quote of J.P. Morgan **"Gold is money and nothing else"** The realisation was a way to combine:

- **Massive credit expansion and any/all means of monetary stimulus leading to loss of purchasing power (inflation); and**
- **Falling prices & debt reduction typical of a Kondratieff Winter (deflation).**

Paradox of inflationary deflation

It boiled down to solving the paradox of how we could simultaneously experience inflation and deflation. It depends on the definition of money. There can be **INFLATION MEASURED IN ONE KIND OF MONEY AND DEFLATION MEASURED IN ANOTHER**, hence "Inflationary deflation".

Facsimile



Source: Clip Art

Real



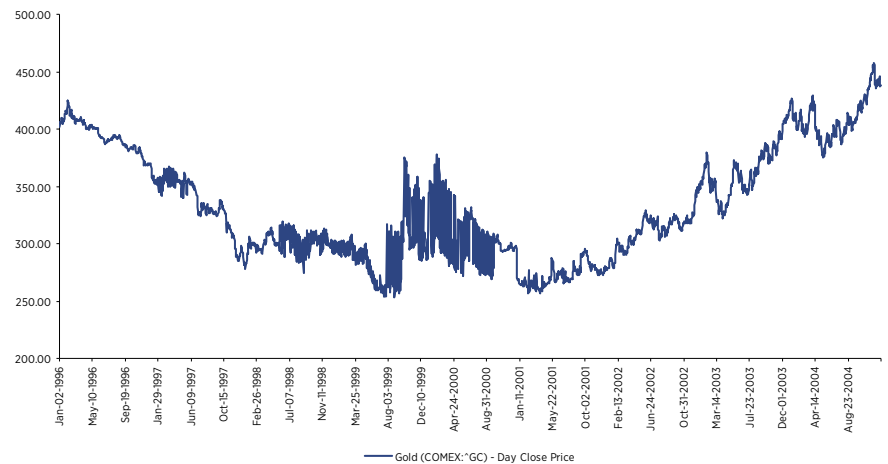
Source: Clip Art

Although the process is quite well advanced, it **still has a lot further to go**.

Lows in gold price signalled start of Kondratieff
Winter

If you look at a chart of the gold price you can see the **double bottom either side of the NASDAQ crash of 2000** – the latter being the catalyst for the beginning of the Winter phase of this cycle in my opinion. Here is the chart of the gold price during 1996-2004:

Gold price 1996-2000 (US\$ oz.)



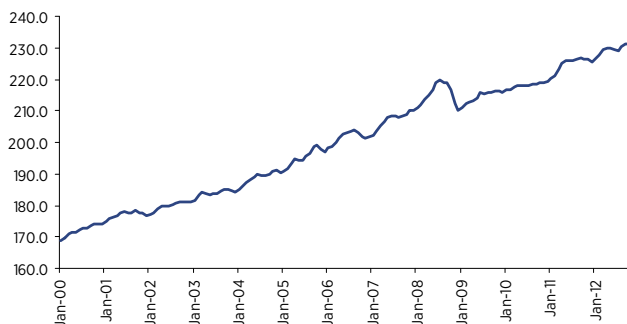
Source: Capital IQ

Since gold has always outperformed during a K-Winter, this **supports my argument that the current K-Winter began in 2000**, marking the onset of the inflationary deflation.

CPI in absolute and gold terms

Now let's look at prices, in terms of the CPI for the US, measured in different forms of money. Since 2000, we've obviously had **inflation in the cost of most goods and services when measured in current US dollars** - as captured by the CPI inflation data in the left hand chart below. When **the same data is measured in terms of gold, we see deflation** as per the right hand chart.

US consumer price index 2000-2012



Source: Bureau of Labor Statistics

US consumer price index in terms of gold 2000-2012



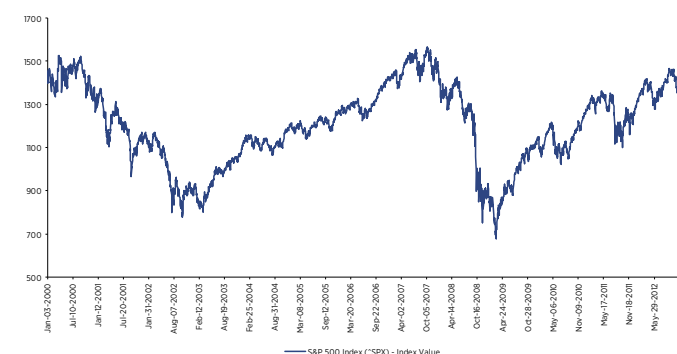
Source: Bureau of Labor Statistics, Kitco

S&P 500 in absolute and gold terms

Let's look at "risk assets" like equities, housing/real estate and commodities which would normally underperform during a K-Winter.

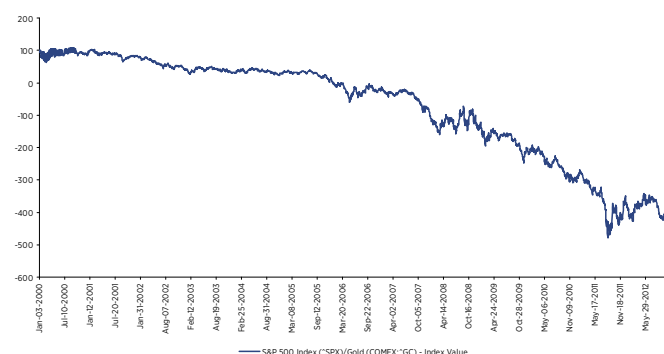
Since 2000, **equity prices, measured by the S&P 500, are almost unchanged. In terms of gold, however, the "deflation" in equity prices is stark to say the least:**

S&P 500 2000-2012



Source: Capital IQ

S&P 500 in terms of gold 2000-2012

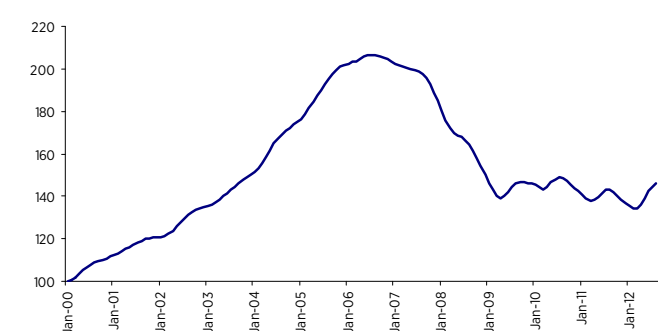


Source: Capital IQ

House prices in absolute and gold terms

Housing/real estate is even worse, as these charts for US house prices show:

S&P Case-Shiller Home Price Index for the US 2000-2012



Source: S&P Case-Shiller

S&P Case-Shiller Home Price Index in terms of gold 2000-2012



Source: S&P Case-Shiller, Kitco

Commodity prices in absolute and gold terms

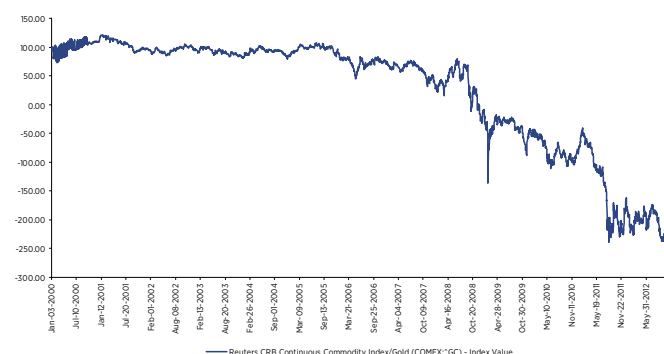
It's **not surprising**, given the extent of monetary stimulus (and the growth of China), that commodity prices (represented by the Reuters/CRB Continuous Commodity Index) have fared well in current dollar terms. Having said that, even the trend in commodity prices when measured in gold is sharply down:

Reuters/CRB Continuous Commodity index 2000-2012



Source: Capital IQ

Reuters/CRB Continuous Commodity index in gold 2000-2012

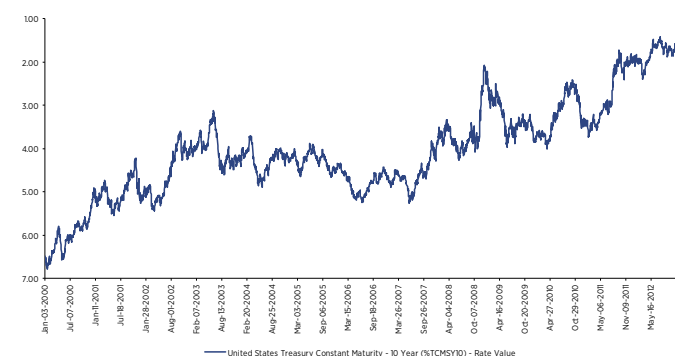


Source: Capital IQ

Government bonds in absolute and gold terms

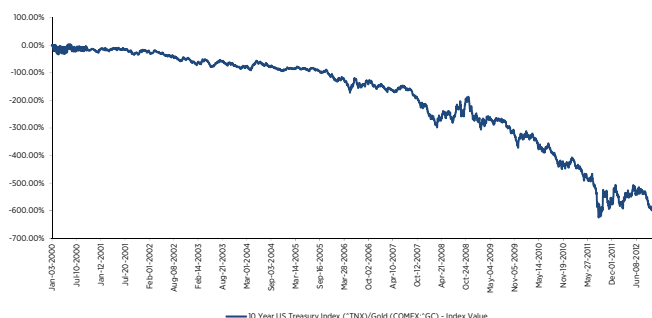
Then we get to government bonds which would be expected to outperform during a K-Winter. **So far they have – significantly – helped by falling interest rates and a flight to safety.** In gold terms, however, even the “risk free” US Treasury has been decimated:

US 10-year Treasury yield (Inverted) 2000-2012



Source: Capital IQ

US 10-year Treasury yield (Inverted) in terms of gold



Source: Capital IQ

Performance versus long wave prediction

The table below compares the performance of the different asset classes so far in this Winter phase (since 2000) versus what would have been predicted by the long wave model:

Performance (so far) of asset classes during Winter of the current fourth long wave cycle (K-4)

Asset class		Summary	Predicted ?
Gold	Outperform	Gold price rose from US\$256/oz to US\$1,731/oz (high of US\$1,920/oz in Aug 2011)	YES
Govt. bonds	Outperform	Long-term yields fell from 6.79% in Jan 2000 to current level of 1.62%	YES
Real Estate	Underperform	Case Shiller house price index rose from 100.0 in Jan 2000 to 145.9 (peak 206.5 in 2006)	YES
Stocks	Underperform	DJIA rose from 9,929 at NASDAQ high (Mar 2000) to 13,021 (high 14,093 in Oct 2008)	YES
Commodities	Underperform	Reut/CRB Continuous Commodity Index rose from 204.3 in Jan 2000 to 572.1 (high 690.1)	NO

Source: Federal Reserve,

What is unusual is the simultaneous outperformance of government bonds and commodities. It is **more evidence of the INFLATIONARY DEFLATION paradox. Something is going to give – and this is the focal point of the great inflation versus deflation debate**, where I believe that inflation prevails.

Monetary train set to jump the tracks again

Having shifted from absolute declines in prices to declines in the first derivative (inflation), I expect the monetary train to **JUMP THE TRACKS for a second time with a rebound in the rate of inflation some time in 2013**. This will eventually develop into an inflationary crisis, causing disruption across the currency, credit and derivatives markets. The end game, I believe, will be the transition to a new monetary system with the replacement of the US dollar as the world's currency.

This view is a long way from the current consensus, so it deserves some explanation.

Part 2 – the approaching wave of inflation in 2013-15

We are already in an inflationary mega-trend

The most powerful inflationary trend of the last
1,000 years

The commentators who dismiss the prospect of inflation maybe don't appreciate that **we are already in the midst of an INFLATIONARY MEGA-TREND and one which is by far the most powerful during the last 1,000 years**. This price upwave or "Great Inflation" is the fourth of the last millennium. The first one began in the twelfth century, the second in the late-fifteenth century, the third in the early eighteenth century, while the current one began in 1897. Each one lasted for between about eighty and one hundred and fifty years.

The four "Great Inflation" of the last millenium

Price upwave	Dates
First Great Inflation	1180-1317
Second Great Inflation	1496-1650
Third Great Inflation	1733-1814
Fourth Great Inflation	1897-

Source: Seymour Pierce Ltd

The usual suspects

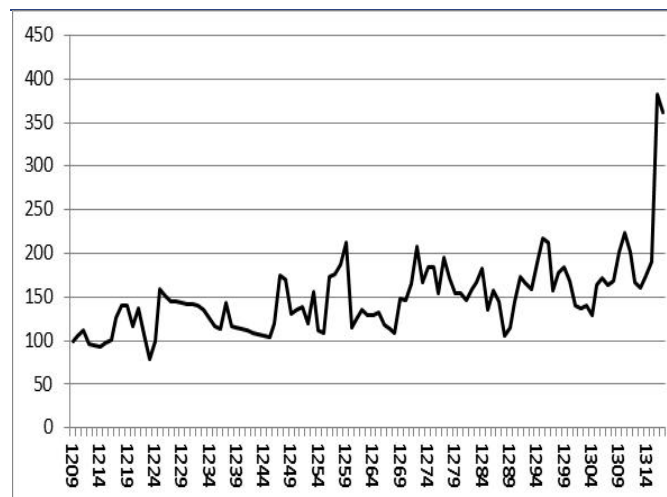
The driving forces for these inflations were similar in each case:

- Population growth – increasing pressure on available resources;
- Governments (or kings) running large deficits, usually as a result of fighting wars; and
- Expansion of the money supply with currency debasement.

Pictures tell the story

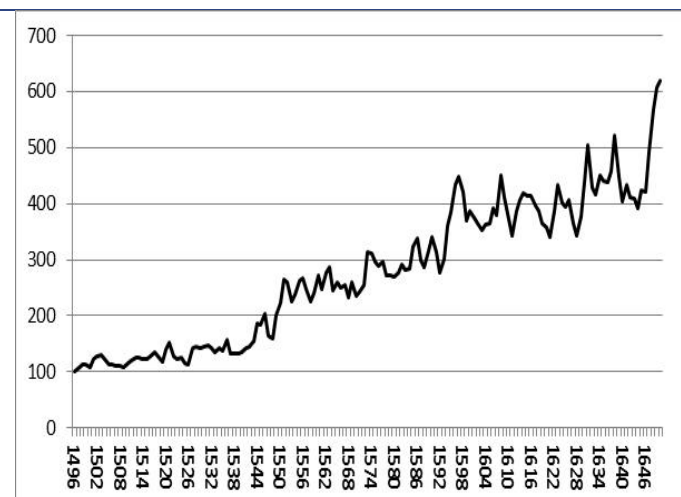
The trends in price levels in the **first three great inflations, along with the unfinished fourth, are shown below.**

First Great Inflation 1209-1317



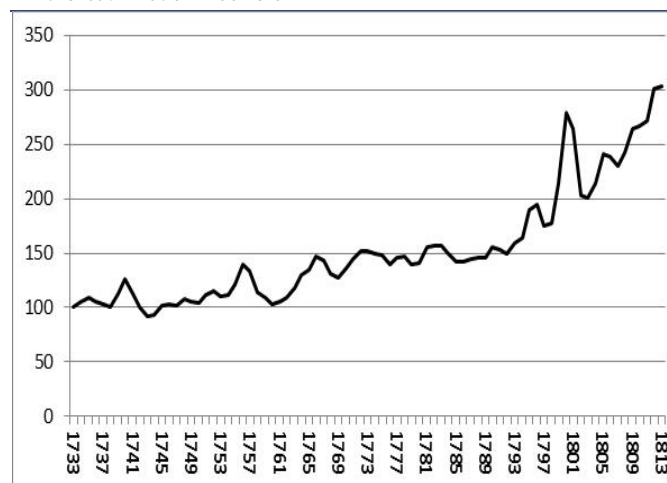
Source: The Price History of English Agriculture, 1209-1914, Purchasing Power of British Pounds from 1245 to Present, Measuring Worth

Second Great Inflation 1496-1650



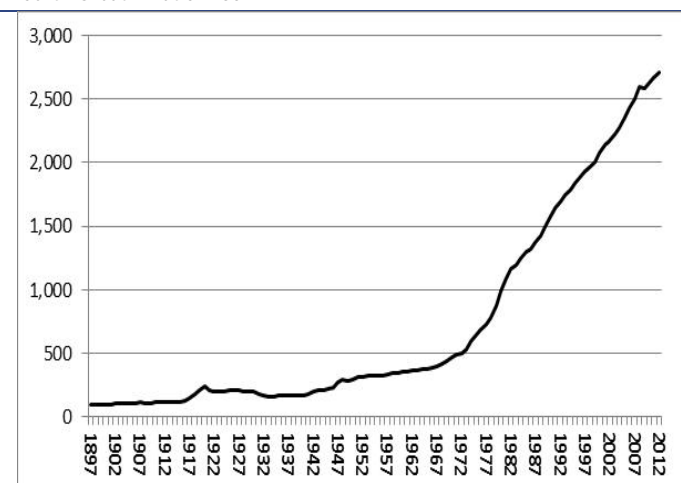
Source: Purchasing Power of British Pounds from 1245 to Present, Measuring Worth

Third Great Inflation 1733-1813



Source: Purchasing Power of British Pounds from 1245 to Present, Measuring Worth

Fourth Great Inflation 1897-



Source: Purchasing Power of British Pounds from 1245 to Present, Measuring Worth

Today's price stability is yesterday's Price Revolution.....go figure (as they say)

The second great inflation of 1496-1650 was **considered so SEVERE at the time that this period became known as the "Price Revolution"**. The CAGR in the price level during that time was below 1.5% p.a. - something which **Ben Bernanke and other central bankers of today would label as "price stability"**. It just shows how far things have (not) "progressed."

How did the first three "Great Inflation" come to an end?

Before we consider what's in store during the remainder of the current "Great Inflation", or price upwave, it's worth **reviewing how the first three came to an end**. The first two are depressing, to say the least. The third one is the exception since Britain - then the global hegemon - got sound money "religion" and adopted the Gold Standard.

How the first three Great Inflation came to an end

Price upwave	Summary
First Great Inflation	Banking collapse followed by "Black Death" (with world population reduced by an estimated 20%)
Second Great Inflation	Plague and wars - population reduction again - and decline in silver supply (then the world's money)
Third Great Inflation	"Great Re-coinage of 1816" and Britain adopted the Gold Standard

Source: Seymour Pierce

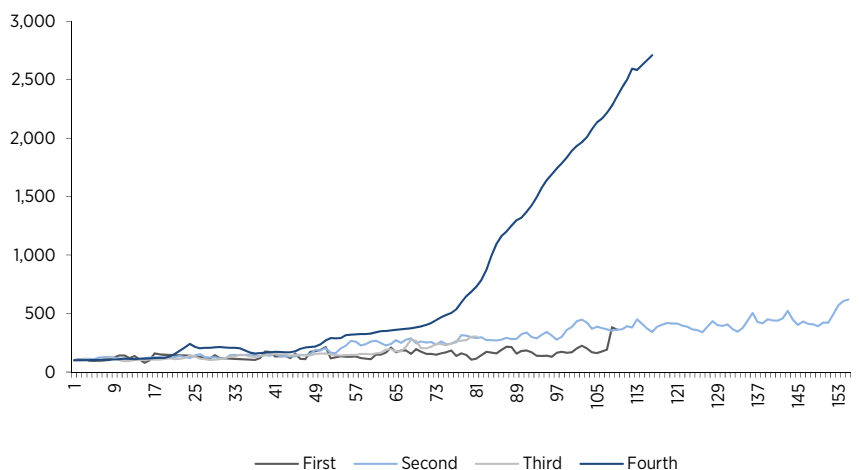
Ain't gonna happen, by the looks

There is **no evidence** that sound money policies will be adopted by the US. Quite the contrary, in fact. In 2011, the congressional "Super Committee" could not even agree on modest cuts to the Federal budget. At this point, it seems that only a crisis will precipitate change.

This price upwave is almost of the scale

Look at the Y-axis of the first three inflations and then look at the current one - there is no comparison. **Here they are all on the same chart rebased to 100** - although I've labelled the X-axis according to the current cycle. The first three are almost horizontal in comparison.

Winter phase: CAGR in CPI - fourth long wave versus first three (rebased: year 1 = 100)



Sources: See the four charts above

There are two key points from the charts of these inflationary periods that I want to highlight:

- You can see how the trajectory of inflation in the current cycle increased significantly in the early 1970s - obviously this was **when Bretton Woods (see below) collapsed** which severed any direct link between gold and paper currencies; and

- It's very noticeable how the rate of **inflation accelerated sharply in the latter stages of each of the first three great inflations**. The timing of the accelerated phase in each of the three and the CAGR of inflation in each one versus the CAGR of the whole period is shown in the next table:

CAGR in inflation during the first three Great Inflations

Great Inflation	1209-1317	1496-1650	1733-1813
Whole period	1.2%	1.2%	1.4%
Final phase	8.2%	2.7%	4.2%

Source: Seymour Pierce

With hindsight, it's clear that the collapse of Bretton Woods had a very significant impact on the rate of inflation. In the same way, I believe that the recent announcements of **OPEN-ENDED MONEY PRINTING ACROSS THE DEVELOPED WORLD are equally significant**. My view is that we are moving into the final phase of this Great Inflation with the associated acceleration in inflation as seen in each of the previous upwaves.

New era: post-QE3

Open-ended money printing

On 13 September 2012, Bernanke announced QE3 – the programme to buy US\$40bn per month of MBS with newly created money by the Federal Reserve on an **unlimited time horizon**. The QE3 announcement followed hot on the heels of the announcement of a similar plan (termed OMT – Outright Monetary Transactions) for unlimited bond buying by the ECB's Draghi (subject to EU nations agreeing conditions). On 19 September 2012, the Bank of Japan, one of the worst offenders, announced yet another round of QE. The Swiss National Bank has already pledged to print as many Swiss francs as required to defend the 1.20 level against the crippled Euro.

And the cure for a financial bubble....

We have entered a **NEW ERA in the destruction in the purchasing power of fiat currencies and the creation of a bubble in money itself**. Dr Kurt Richebacher, publisher of "The Richebacher Letter" until his death in 2007, sagely remarked that:

"The only cure for a bubble is to prevent it from developing."

Paul Volcker said of Kurt Richebacher:

"Sometimes I think that the job of central bankers is to prove Kurt Richebacher wrong,"

I fear that it's already too late and Kurt Richebacher is going to be proved right again. Ironically, the **title of his last newsletter from 22 March 2007 was "A speculative bubble like no other."**

Long waves and monetisation

The following quote (apologies to the author whose name I've lost) links the impact of monetisation on the late stages of the long wave:

"Once the forces of a long wave decline are in motion, they will tend to persist even in the face of substantial money supply injections – like a car skidding backward downhill while its wheels continue to spin uselessly in an uphill direction. Eventually, the inflationary forces catch fire again and the car, once again, lurches upward, but with greater difficulty and a higher rate of inflationary friction. Sooner or later, additional money printing produces no economic motion – only higher prices – and the economy figures its inevitable economic decline."

The famous money speech from Atlas Shrugged

There should be more outrage regarding the obscene abuse of the monetary system by the central banks and the Federal Reserve in particular as the "guardian" of the world's reserve currency, such as it is. Money represents much more than just a medium of exchange, it represents **THE CAPITALISATION OF HUMAN LABOUR**. Here is a short piece of the famous "money speech" from **Ayn Rand's classic "Atlas Shrugged"**, a book which is proving chillingly prophetic in terms of unfolding events:

“Money is the barometer of a society’s virtue. When you see that trading is done, not by consent, but by compulsion – when you see that in order to produce, you need to obtain permission from men who produce nothing – when you see that money is flowing to those who deal, not in goods, but in favors – when you see that men get richer by graft and by pull than by work, and your laws don’t protect you against them, but protect them against you – when you see corruption being rewarded and honesty becoming a self-sacrifice – you may know that your society is doomed... Whenever destroyers appear among men, they start by destroying money, for money is men’s protection and the base of a moral existence. Destroyers seize gold and leave to its owners a counterfeit pile of paper.”

The impact of inflation

One of the problems with inflation is that it acts as a **REGRESSIVE FORM OF TAXATION** hurting low and middle income families the most. From Wikipedia:

“A regressive tax is a tax imposed in such a manner that the tax rate decreases as the amount subject to taxation increases... In terms of individual income and wealth, a regressive tax imposes a greater burden (relative to resources) on the poor than on the rich”

Looking at the US, accelerating inflation will pose a serious economic challenge for much of the population as the American Payroll Association reported last month that 68% of American are already living “paycheck to paycheck.”

Complacency and the velocity of money

Velocity of money

I showed the chart for the **velocity of money for the MZM aggregate above**. Many commentators who disagree with the likelihood of a sharp upturn in inflation point to the comatose level of in this measure as proof that the chance of a pick-up in inflation remains remote.

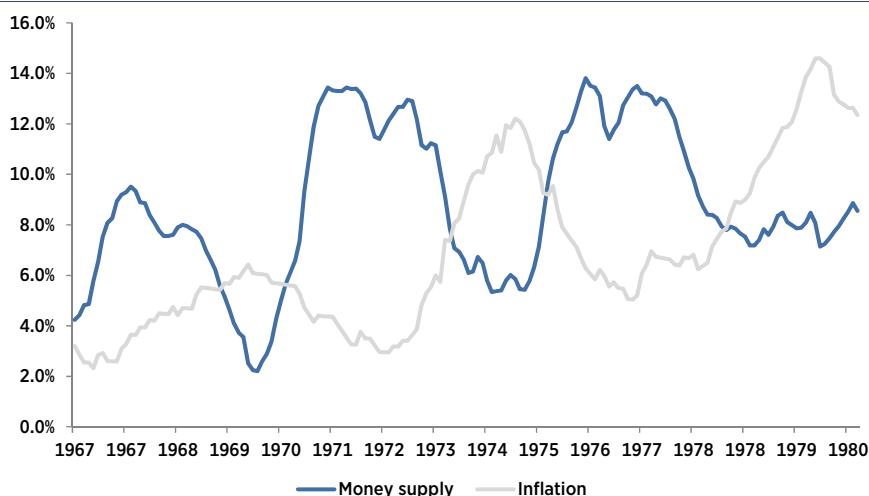
Tipping points....

They overlook two facts relating to the early stages of historic examples of inflationary periods:

- The rise in prices tends to lag the growth in money supply; and
- The velocity of money can remain stable, or continue to fall, for some time.

You can see both during the inflationary Summer period (1967-80) of the current long wave in terms of US data. Firstly, the three inflationary peaks in 1970, 1974 and 1980 were all preceded by peaks in money supply growth between 2-4 years earlier.

Money supply (M2) and inflation (CPI) during 1967-80

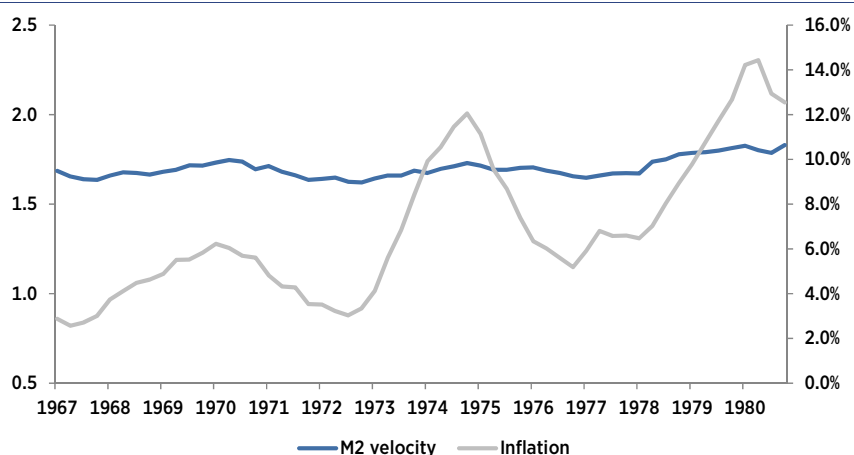


Source: Federal Reserve Bank of St Louis

Please note, I have used the M2 aggregate for money supply since the data for MZM money supply is not available before 1980 (even though the MZM velocity is).

During this entire period, when inflation varied between 2-14%, the velocity of M2 remained VERY stable:

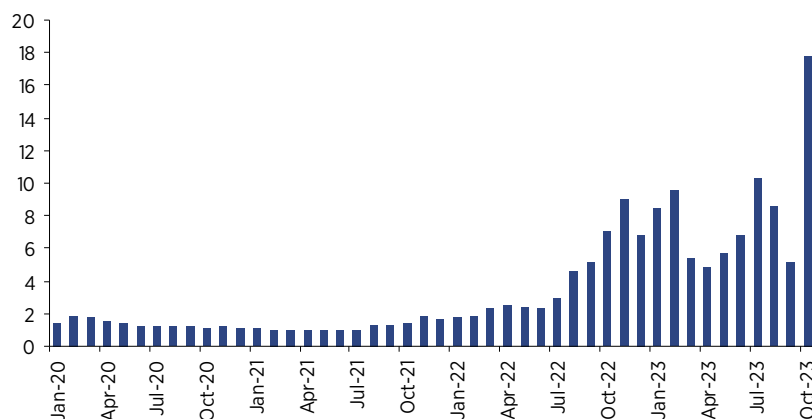
Velocity of money (M2) and inflation (CPI) during 1967-80



Source: Federal Reserve Bank of St Louis

In severe, or hyperinflations, like Weimar, a **tipping point is reached**, when velocity spikes upward and prices rise faster than the increase in the money supply, as confidence in the value of the currency suddenly plummets. The chart below for the Weimar period show the trend in the German wholesale price index and the velocity of money from January 1921 to October 1923

Velocity of money in Germany: January 1920-October 1923



Despite Bernanke pushing ahead with an indefinite version of QE3, most commentators (surprisingly) do not view it as inflationary, or at least not for a considerable length of time. While it should be abundantly clear that his entire strategy has been inflationary since Lehman collapsed, I think the vast majority of commentators still **underestimate Bernanke's determination to reduce the value of the dollar through inflation**. Bernanke's claim to fame as an academic is for his study of the Great Depression and how to combat deflation. I went back and re-read Bernanke's old essays and speeches on preventing deflation.

Bernanke's emphasis on dollar devaluation gets overlooked

What is very striking in two speeches is how he **singles out dollar devaluation as being the KEY policy which took the US out of the Great Depression**. Here is a segment from his famous "helicopter speech" in 2002, i.e. the one more formally known as "Deflation: Making Sure "It" Doesn't Happen Here."

"Although a policy of intervening to affect the exchange value of the dollar is nowhere on the horizon today, it's worth noting that there have been times when exchange rate policy has been an effective weapon against deflation. A striking example from U.S. history is **Franklin Roosevelt's 40 percent devaluation of the dollar against gold in 1933-34**, enforced by a program of gold purchases and domestic money creation. The devaluation and the rapid increase in money supply it permitted ended the U.S. deflation remarkably quickly. Indeed, consumer price inflation in the United States, year on year, went from -10.3 percent in 1932 to -5.1 percent in 1933 to 3.4 percent in 1934."

Bernanke has been telling the same story since the last century

Here is a segment from a 1999 speech at Princeton, "Japanese Monetary Policy: A Case of Self-Induced Paralysis?"

"Franklin D. Roosevelt was elected President of the United States in 1932 with the mandate to get the country out of the Depression. In the end, the **most effective actions he took were the same that Japan needs to take - namely, rehabilitation of the banking system and devaluation of the currency to promote monetary easing**. But Roosevelt's specific policy actions were, I think, less important than his willingness to be aggressive and to experiment - in short, to do whatever was necessary to get the country moving again. Many of his policies did not work as intended, but in the end FDR deserves great credit for having the courage to abandon failed paradigms and to do what needed to be done."

In case you don't think the Federal Reserve is serious in reducing the value of the dollar, it's worth remembering these comments from high-profile hedge fund manager, Kyle Bass, speaking at the annual AmeriCatalyst event in late-2011:

"The government's idea right now is we are going to export our way out of this and when I asked a senior Obama administration official last week how are we going to grow exports if we won't allow nominal wage deflation? And he says, **we are just going to kill the dollar**. I said okay...I mean, that's the only answer."

Robert Rubin is trying to tell us something

Let's also remember Robert Rubin's comments regarding the dollar which appeared on Bloomberg on 9 March 2012. Rubin is another consummate "insider" having been Secretary of the Treasury during Clinton, ex-GS and Citi, Bilderberg and Co-Chair of the Council on Foreign Relations.:

"Robert Rubin, who as U.S. Treasury secretary in the 1990s promoted a stronger dollar, said he has too much of his personal investments in the currency. A 'disproportionate amount' of his assets are in cash and he **'should be more allocated away from the dollar,'** Rubin, 73, said yesterday in a speech at the TradeTech conference in New York. He said he also was "greatly overweighted...My overall conclusion is we should all hope for the best, he said. **'It is absolutely prudent to prepare for the worst.'**"

Two “sacred cows” under threat

Crumbling foundations of the dollar's reserve status

All paper currencies are devaluing relative to gold but, as the world's reserve currency, the **US dollar** stands at the centre of all this. The **foundations of the dollar's status are being dismantled while relatively few commentators seem to be paying attention**. For example, let's consider two issues which have been widely touted as critical to preserving the dollar's reserve currency status:

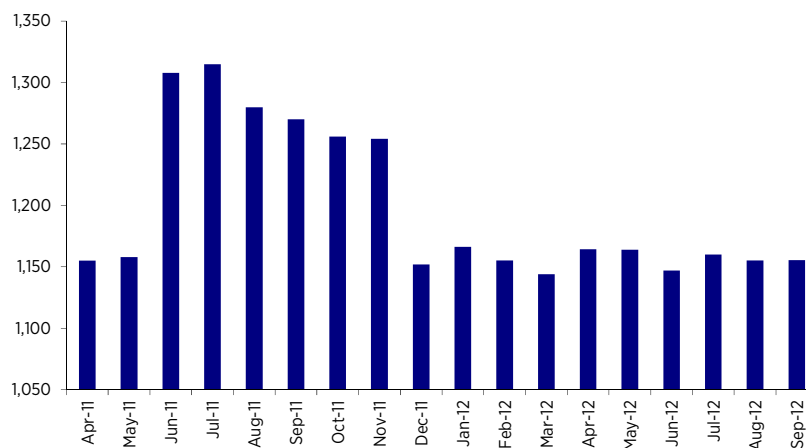
- **China has to buy US Treasury debt; and**
- **The dollar has a monopoly on use in world trade.**

Unfortunately, one of these has vanished and preparations are well advanced for the demise of the second.

China has been a seller....

The consensus view for years has been that China **HAS** to keep buying US Treasuries because the alternative was mutually assured economic destruction of the US dollar and the Chinese economy. The chart below shows how **July 2011 marked the peak in Chinese holdings** – since then the holdings have been reduced by about US\$160bn, i.e. about 12%.

Chinese holdings of US Treasuries since April 2011 (US\$ bn)



Source: US Treasury

....since S&P downgraded the US AAA credit rating

In my opinion, it's **not a coincidence that S&P downgraded the US AAA sovereign credit rating on 5 August 2011 and Chinese holdings of US Treasury bonds peaked at US\$1.315 trn in July 2011**. Indeed, China is showing a marked reluctance to continue funding US deficits as its holdings of US Treasuries have fallen by approximately US\$160bn from the July 2011 peak. Meanwhile, the US Federal deficits remains above US\$ 1 trillion. In spite of this, nobody seems to care!

China and its trading partners preparing for trade in local currencies

Besides ready buyers of US debt, the foundation of the dollar's reserve currency status (post Bretton Woods) has been its **near-monopoly use for transacting world trade**. Preparations to dismantle the dollar's monopoly on world trade are taking place in front of our eyes, primarily by China in conjunction with its trading partners. Few people seem to be worried about this issue either.

BRICS policy following March 2012 meeting

The BRICS nations (including South Africa as the “S”) met in New Delhi on 29 March 2012 where they laid the groundwork for settling trade balances in their own currencies. According to Wikipedia:

“To promote trade in local currencies, the BRICS countries signed the Master Agreement on Extending Credit Facility in Local Currency and the Multilateral Letter of Credit Confirmation Facility Agreement to replace the United States dollar as the main unit of trade between them.”

BRICS leaders at March 2012 summit



Source: bricsindia.in

Since then, **preparations by the BRICS have taken a further step forward**. The following was from a Forbes report on 20 June 2012:

“Brazil, Russia, India and China, the BRIC countries, are back to talking about creating a unified financial system where they can avoid euro and dollar volatility. This time, a pooling of Central Bank dollars from the countries in case liquidity dried up as the world tracks the West’s crisis momentum. Regardless of the amount of difficulty involved, the big four emerging markets plus South Africa said earlier this week they were considering setting up a foreign-exchange reserve pool and a currency-swap arrangement in an effort to avoid any credit crisis stemming from the advanced economies. China President Hu Jintao and other leaders met in Los Cabos, Mexico for the G20 Summit. There, according to the Chinese Foreign Ministry, the leaders discussed the currency swap and foreign-exchange reserve pool ideas with their Russian, Indian and Brazilian peers. Hu asked the finance ministers and central bank chiefs to implement these ideas, according to a story in *China Daily* on Wednesday morning.”

China’s bilateral currency agreements with key trading partners

Now let’s consider the raft of bilateral trade agreements between China and several of its major trading partners:

- **Russia** – Vladimir Putin and Wen Jiabao announced an agreement to conduct bilateral trade in their own currencies in November 2010. This was followed up by the signing of a bilateral currency settlement agreement between their central banks in June 2011.
- **Japan** – China and Japan announced plans to promote direct exchange of their currencies in December 2011, negating the need to buy dollars. On 1 June 2012, China and Japan began to directly trade their currencies on the inter-bank foreign exchange markets in Shanghai and Tokyo for the first time.
- **Germany** – following talks in late-August 2012, China and Germany announced an accord to transact an increasing amount of their trade in Euros and the Yuan. This was from a Reuters report on 30 August 2012:

“Germany and China plan to conduct an increasing amount of their trade in euros and yuan, the two nations said in a joint statement after talks between Chancellor Angela Merkel and Chinese Premier Wen Jiabao in Beijing on Thursday. ‘Both sides intend to support financial institutions and companies of both countries in the use of the renminbi and euro in bilateral trade and investments,’ said the text of the statement. It also said that both parties welcomed investments in China’s interbank bond market by German banks and supported the settlement of business in the yuan by German and Chinese banks and the issuance of yuan-denominated financial products in Germany.

- **Australia** – in late- March 2012, China and Australia agreed a currency swap with Australia. The Reserve Bank of Australia commented:

“The main purposes of the swap agreement are to support trade and investment between Australia and China, particularly in local-currency terms, and to strengthen bilateral financial co-operation...(there were) increasing opportunities available to settle trade between the two countries in Chinese renminbi and to make renminbi-denominated investments.”

Australia is obviously a major exporter of key commodities, like iron ore, coal and agricultural products.;

- **Brazil** – which is the other major supplier of iron ore. Besides the BRICS agreement (above), China and Brazil agreed a currency swap last month;
- **Chile** – with iron ore sorted out, what about copper? Last month, Chinese Premier Wen Jiabao and Chilean President Sebastian Pinera agreed to upgrade their bilateral ties to a strategic partnership and double trade in three years. The agreement proposed the creation of currency swaps, reportedly to expand settlement in Yuan;
- **Taiwan** – a currency clearing agreement was signed between China and Taiwan In September 2012. Trade will be settled in local currencies at the Bank of Taiwan in Shanghai; and
- **UAE** – an agreement was reached to settle oil trades between China and the UAE in Yuan.

I've just covered three major ones, but there are many others, for example, China has also agreed a currency swaps with other countries, **including Thailand, Indonesia, Malaysia, Indonesia, and Kazakhstan.**

Yuan now accounts for 10% of China's foreign trade

It should be clear by now that **preparations are well advanced for the replacement of the US dollar's monopoly on world trade.** In fact, according to the latest data from the Society for Worldwide Interbank Financial Telecommunication (SWIFT), **Yuan-denominated trade accounted for 10 percent of China's total foreign trade in July 2012 compared with zero two years ago.** As this process unfolds, the value of the US dollar will erode – which will manifest itself in inflation.

Other preparations

China has taken other steps made several other steps towards internationalising the use of the Yuan:

- It was announced in early March 2012 that the China Development Bank will make Yuan loans to development banks in the other BRICS nations;
- After a 5-year gap since the last relaxation of the trading band, China announced in April this year that it would be increased from 0.5% to 1.0% versus the US dollar;
- Last September, China and Britain agreed to cooperate in establishing London as a major offshore trading hub for the Yuan; and
- On 29 June 2012, China announced that it had set up a trial zone for Yuan convertibility. This was from a BBC report:

“China is to set up a special business zone to experiment with the yuan's convertibility, the latest step in its moves to open up its capital markets. The Qianhai zone will be established in the southern city of Shenzhen, just across the border from Hong Kong...It has also been pushing for a more global role for its currency. Zhang Xiaoqiang, vice chairman of China's National Development and Reform Commission, the state planning agency, said: ‘The country's policy is to gradually open up its capital account and realise the full

convertibility of the yuan.' Qianhai, as the first experimental zone of the country's modern service industry, should be a pioneer of that."

A Yuan-based regional bloc is forming

On 31 October 2012, China Daily commented on the conclusions of a report from the Peterson Institute for International Economics that a China based currency bloc is forming in Asia:

"The report agreed that the renminbi has been moving closer to becoming a global reserve currency. It noted that **seven out of 10 major economies surrounding the Chinese mainland were tracking the yuan more closely than they do the US dollar**, including South Korea, Indonesia, Malaysia, Singapore and Thailand. Only three economies, Hong Kong, Vietnam, and Mongolia, still have their currencies following the US dollar more closely than the yuan"

Similarities with events prior to the last change in the monetary system

Bretton Woods quasi-Gold Standard collapsed in 1971

I am **struck by the similarities between the events which preceded the demise of the world's last monetary system - the post World War II Bretton Woods (BW) monetary system in 1971 and what's happening today.**

President Nixon meets President de Gaulle in 1969 prior to the collapse of Bretton Woods



Source: Jotzet / Foter / Public Domain Mark 1.0

Space prevents a detailed analysis of the demise of BW, but here is a brief summary:

- In the early 1960s, the US began running trade and budget deficits which putting pressure on the dollar's peg to gold at US\$35/oz. In 1961, the US and UK together with Germany, France, Switzerland, Italy, Belgium, Netherlands and Luxembourg formed the London Gold Pool. These countries agreed to pool their gold reserves and sell gold to maintain the dollar peg;
- The escalation of the Vietnam War and LBJ's social programmes in the mid-1960s increased the deficits and put even further downward pressure on the dollar. The London Gold Pool began losing large quantities of gold as the US exported its inflation (and Treasury securities) to the rest of the world.
- One major trading partner, in particular, took exception to US monetary and fiscal policy and that was France. Speaking in 1965, French President

Charles de Gaulle described the dollar as “America’s exorbitant privilege”, stopped buying US Treasuries and began converting US dollar reserves into gold bullion at an increasing rate. Other countries began to follow suit.

- In March 1968, France pulled out of the London Gold Pool, the Fed Chairman threatened to defend the \$35/oz gold price down to the “last ingot” and the day after 225 tonnes disappeared in a single day, the London Gold Pool collapsed and the gold’s dollar peg was broken.
- In 1971, as US inflation hit 5.8% and Switzerland and France made large redemptions of dollars for US gold reserves, President Nixon finally closed the “Gold window” and the direct convertibility of the dollar into gold. So ended Bretton Woods, setting the scene for the acceleration in inflation and surge in the gold price during the 1970s.
- The inability of the US to pursue prudent fiscal and monetary policies opened up the structural flaws in Bretton Woods which were eventually overwhelmed by markets. The demise of BW prompted the transition to the current system of un-backed floating currencies whose shelf life is running out.

If we fast forward to today, it’s abundantly clear that **China is taking a similar role to that of France in the mid-1960s, i.e. acting as the main protagonist shepherding the world towards a new system.**

High-level Chinese criticism of today’s dollar-denominated system

In the same way that President de Gaulle was a vocal critic of BW, senior Chinese officials have criticised the current system. For example, outgoing President Hu Jintao described the US dollar-dominated system as a **“product of the past”** in January 2011.

Zhou Xiaochuan, Governor of the People’s Bank of China (PBOC), has been a particularly high profile critic of our current system. On 23 March 2009, the PBOC released a statement (also published on the Bank for International Settlements website) by Zhou **“Reform the International Monetary System”** in which he called for the replacement of the dollar as the world’s reserve currency:

“The outbreak of the current crisis and its spillover in the world have confronted us with a long-existing but still unanswered question, i.e., what kind of international reserve currency do we need to secure global financial stability and facilitate world economic growth, which was one of the purposes for establishing the IMF?”

Un-backed systems like today’s are the exception

Zhou made the valid point that the current un-backed monetary system is the EXCEPTION and, by implication, unsustainable:

“Acceptance of credit-based national currencies as major international reserve currencies...is a rare special case in history”

Triffin’s Dilemma recycled

Referring to the dollar, Zhou highlighted the problem of “Triffin’s Dilemma”, i.e. the conflict of interest between a national currency and its use as the reserve currency, which had been the essence of French dissatisfaction:

“On the one hand, the monetary authorities cannot simply focus on domestic goals without carrying out their international responsibilities; on the other hand, they cannot pursue different domestic and international objectives at the same time. They may either fail to adequately meet the demand of a growing global economy for liquidity as they try to ease inflation pressures at home, or create excess liquidity in the global markets by overly stimulating domestic demand. The Triffin Dilemma, i.e., the issuing countries of reserve currencies cannot maintain the value of the reserve currencies while providing liquidity to the world, still exists.”

Loss of US AAA rating was a turning point

In my opinion, **preparations for the transition to a new monetary began to speed up following S&P's downgrade of the US sovereign credit rating from AAA to AA+ on the evening of 5 August 2011.** I see this as a VERY significant event. While the US "establishment" (Obama, Geithner and Buffet) lashed out at S&P, China lashed out at the US. The following was from a BBC report on 6 August 2011, which quoted China's state-owned news agency repeating Zhou's call for a new reserve currency:

"China has scolded the US over its 'addiction to debt' after rating agency Standard & Poor's downgraded the US top-notch AAA rating to AA+. State news agency Xinhua said unless the US cut its 'gigantic military expenditure and bloated welfare costs,' another downgrade would be inevitable. Xinhua called for the printing of US dollars to be supervised internationally and repeated China's contention that **a new global reserve currency might be needed.**"

China acting like France pre-BW demise

Besides criticism of the existing system, there are two other ways that China (in modern times) is behaving like France in the 1960s/beginning of the 1970s:

- We've already seen (above) how **China has become a net seller of US Treasuries**; and
- **China has also been accumulating gold.** In April 2009, China surprised the gold market with the announcement that it had increased its gold reserves by 454 tonnes, to 1,054 tonnes (still a long way below the 8,132 tonnes of gold reserves which the US alleges to possess), since the last it had provided an update on its gold reserves in 2003.

Ssshhh.....China is quietly adding to its gold reserves

Anecdotal evidence is strongly supportive of the view that China is once again increasing its gold reserves even though it has yet to make a formal announcement. I highlighted the significance of the downgrade of the US AAA credit rating on 5 August 2011 earlier. Only two months later, **reports of heightened demand for physical gold from Asia – and especially China – in the London market began to filter through.** Here are several examples from various sources:

21 October 2011 – King World News' "London Trader":

"We had a major, major physical buy order today. The Chinese bought a massive amount of physical today at the lows."

17 January 2012 – King World News' "London Trader":

"They (the Chinese) have recently taken another roughly 150 tons away from the Western central banks."

18 March 2012 – Jim Willie of the Hat Trick Letter:

"My best gold trader source...The Chinese are the principal buyers, but he swears that China is not alone... The battle is being won in the vaults, where the gold cartel is being depleted"

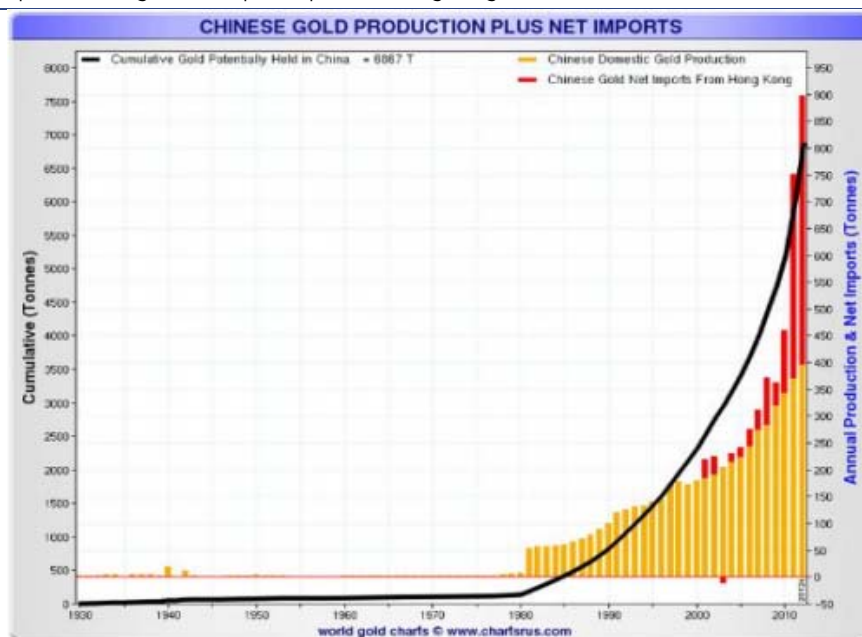
19 June 2012 – TF Metals Report:

"London Good Delivery bars are being delivered to Eastern buyers. Instead of being vaulted inside the LBMA system, these bars are being sent directly to refiners. The bars are then being melted and recast in 1 kilogram sizes."

Surging Chinese gold imports via Hong Kong

There is other evidence of strong Chinese gold demand in the **data for Chinese gold imports via Hong Kong.** During the July-September quarter of 2012, they rose 52% to 199 tonnes compared with 131 tonnes a year earlier. On an annualised basis, this is about 800 tonnes compared with annual world mine production of c. 2,700 tonnes. The next chart aggregates Chinese gold production and imports via Hong Kong:

Output of China gold mines plus imports via Hong Kong



Source: Chartsrus

Chinese officials confirming pro-gold policy

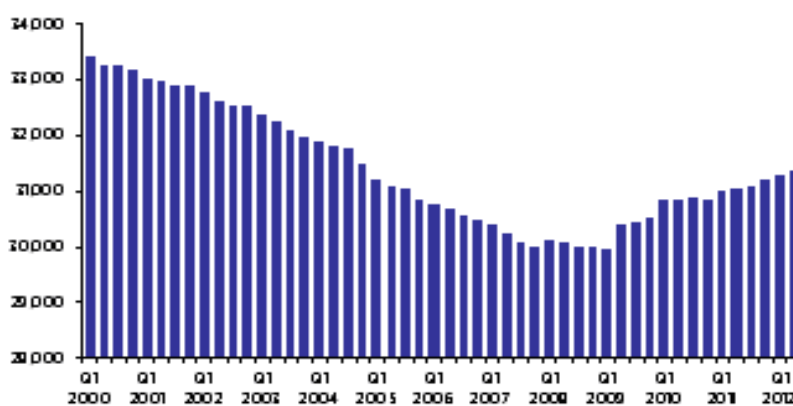
On 8 November 2012, Zhang Jianhua, an official of the Peoples Bank of China stated:

"The Chinese government should not only be cautious of the imported risk caused by rising global inflation, but also further optimize its foreign exchange portfolio and purchase gold assets when the gold price shows a favorable fluctuation."

I think it already is, but will (undoubtedly) continue adding to its reserves. Just to emphasise the point, a few days later Gao Wei, an official from the Department of International Economic Affairs of Ministry of Foreign Affairs, writing a commentary in the China Securities Journal argued that China's gold reserves were "too small."

Like France in the 1960s, China is the main protagonist, but **other central banks are also increasing their gold reserves, just as they did in the final days of BW**. These institutions have had an almost Damascene conversion in recent years as they have changed from sizeable net sellers to sizeable net buyers. We probably shouldn't be surprised that a) they were late joining the party and b) the inflection point was in 2008 – when the Great Financial Crisis hit - 7 years into the gold bull market.

Central bank gold holdings since 2000 (tonnes)



Source: World Gold Council

Transition to a new monetary system

New reserve currency will be an expanded SDR

Careful examination the writings of elite level central bankers, like the PBOC's Zhou, and western banking/political "insiders", it becomes clear that the **basic plan for the new reserve currency has already been worked out**. Replacing the dollar will be a new global reserve currency based on a basket of leading currencies - an **EXPANDED VERSION OF THE IMF'S SPECIAL DRAWING RIGHT (SDR)**.

Here is Wikipedia describing the SDR in its current form:

"Special drawing rights (SDRs) are supplementary foreign exchange reserve assets defined and maintained by the International Monetary Fund (IMF). Not a currency, SDRs instead represent a claim to currency held by IMF member countries for which they may be exchanged...While they may appear to have a far more important part to play, or, perhaps, an important future role, being the unit of account for the IMF has long been the main function of the SDR. Created in 1969 to supplement a shortfall of preferred foreign exchange reserve assets, namely gold....the value of a SDR is defined by a weighted currency basket of four major currencies: the US dollar, the euro, the British pound, and the Japanese yen."

Current composition of SDR

In its current form, the **SDR is composed of the following**:

Current composition of the Special Drawing Right (SDR)

Currency	% of SDR
US dollar	43.9%
Euro	34.4%
Sterling	11.5%
Yen	10.2%

Source: Wikipedia

Yuan and possibly other BRICS currencies will be added

In its expanded form it is **likely to include the Chinese Yuan (Renminbi) and potentially the currencies of other BRICS nations**. Let me explain.

Key speech by PBOC Governor

In his landmark 2009 essay, "Reform the international monetary system", the PBOC's Zhou advocated a super-sovereign reserve currency based on the SDR concept:

"The IMF also created the SDR in 1969, when the defects of the Bretton Woods system initially emerged, to mitigate the inherent risks sovereign reserve currencies caused. Yet, the role of the SDR has not been put into full play due to limitations on its allocation and the scope of its uses. However, **it serves as the light in the tunnel for the reform of the international monetary system**."

He calls for the SDR to be used in international trade, for the pricing of commodities and financial instruments and as the standard accounting unit:

"The scope of using the SDR should be broadened, so as to enable it to fully satisfy the member countries' demand for a reserve currency. Set up a settlement system between the SDR and other currencies. Therefore, the SDR, which is now only used between governments and international institutions, could become a widely accepted means of payment in international trade and financial transactions. Actively promote the use of the SDR in international trade, commodities pricing, investment and corporate book-keeping. This will help enhance the role of the SDR, and will effectively reduce the fluctuation of prices of assets denominated in national currencies and related risks."

Not surprisingly, Zhou recommends that the currencies of other large economies should be included:

“The basket of currencies forming the basis for SDR valuation should be expanded to include currencies of all major economies, and the GDP may also be included as a weight.”

No doubt, he has the Yuan and some of the other BRICS currencies in mind.

SDR plan backed in official Chinese media

Now let's review an article from the “China Daily” newspaper on 16 June 2012. It has the largest circulation of any newspaper in China and, as Wikipedia explains, is a mouthpiece for Chinese policy:

“it is regarded as the English-language ‘window into China’ and is often used as a guide to official policies... It specifically targets an international audience... For the most part, the paper portrays the official policy of the PRC. The editor of the paper has told foreign editors that the paper's editorial policy was to back the Party line and criticize the authorities only if there was deviation from party policy.”

The article argued that:

“The IMF should fully exercise its role and turn the Special Drawing Rights into a new international reserve currency.”

It goes on to call for the diversification of international reserves within the SDR structure which would:

“permit the US dollar to continue to play an important role in the long term, but other currencies such as the euro, sterling, the yen, and the renminbi (Yuan) would play a greater role as international reserve currencies. **It is also imperative to include the currencies of emerging economies in the currency basket of the Special Drawing Rights** and reform their adjustment and distribution. The IMF should make the currency basket of the Special Drawing Rights reflect the state of the world's economy accurately, and **make the Special Drawing Rights play an important role in international clearing, commodity and asset pricing, as well as in international reserve assets.**”

World Bank President hinted at expanded SDR

Ironically, it's not just China – **even consummate US “insiders” are preparing for a post-dollar reserve currency and have said so publicly.** The President of the World Bank, Robert Zoellick, is a consummate western “insider.” He is ex-US Treasury, Deputy Chief of Staff, Deputy Secretary of State, PNAC, Council on Foreign Relations and Bilderberg. Writing in the FT in November 2010, Zoellick argued that a successor is needed to what he termed the “Bretton Woods II” system of floating currencies. That was stating the obvious, but what was more interesting is that he also called for an expanded SDR to be part of the new monetary system:

“Mr Zoellick, a former US Treasury official, calls for a system that ‘is likely to need to involve the dollar, the euro, the yen, the pound and a renminbi that moves towards internationalisation.’”

So it seems fairly clear that the plan is for continued use of the US dollar and Euro, British pound, etc, albeit in what will (then) be depreciated forms. However, international trade and accounting will be conducted in the new SDR's. It's certainly noteworthy that **US customs forms already have a box for inputting the SDR value of the transaction:**

US customs form

EXPRESS MAIL
UNITED STATES POSTAL SERVICE®
EMS
FLAT RATE ENVELOPE

Customs Declaration Dispatch Note - CP 72

**U.S. POSTAGE PAID
COMMERCIAL BASE
PRICING**

From: [Redacted]
USA

To: [Redacted]
INDIA

License Number(s): [Redacted]
Certificate Number(s): [Redacted]
Invoice Number: [Redacted]

Scheduled Delivery Date: [Redacted]
Insured Amount (US \$): \$10.00
SDR Value: \$6.26

Importer's Telephone/Fax/Email: [Redacted]
Comments (e.g., goods subject to quarantine, sanitary/phytosanitary inspection, or other restrictions): [Redacted]

Detailed description of contents

Qty.	Weight lb. oz.	Value (US \$)	HS Tariff Number	Country of Origin
1	0 6	10.00		

Contents: ☒ Gift ☐ Commercial Sample ☐ Other
☐ Documents ☐ Returned Goods
Explanation: USB Flash Drive

Total Wt. 0 6
Total Value \$10.00
Postage and Fees \$25.71

Sender's Customs Reference (if known): [Redacted]
Importer's Customs Reference (Fiscal or VAT-number of the addressee, if known): [Redacted]

I certify the particulars given in this customs declaration are correct. This item does not contain any dangerous article, or articles prohibited by regulation or by postal or customs regulations. I have met all applicable export filing requirements under the Foreign Trade Regulations.

Sender's signature: [Redacted] Date: 10/08/2009

POSTAL USE ONLY
Date in: [Redacted] Time in: ☐ AM ☐ PM
Employee Initials: [Redacted]

PS Form 2976-A-EMI Do not duplicate this form without USPS approval. The item/parcel may be opened officially. 4 - Sender's Copy

Online Postage
Oct 8, 2009
USPS

Source: US Postal Service

The new reserve currency will need some kind of
"backing"

It should be glaringly obvious where we are heading, but as the purchasing power of the dollar and other currencies declines, I think that there will be an aversion by exporting nations to continue accepting payment in un-backed currency, even one which is broader in construction. On that note, let's consider other remarks made by Zhou Xiaochuan and Robert Zoellick regarding the coming new reserve currency. Zhou argued that it:

"should first be anchored to a stable benchmark."

Robert Zoellick talked about an:

"international reference point."

Now what could act as the "benchmark" or
"reference point"

What could fulfil such a critical role in the world's monetary system? There's only one possibility with a track record of several thousand years as Zoellick stated (leaked) in the FT article:

"The system should also consider employing gold as an international reference point of market expectations about inflation, deflation and future currency values."

One thing comes to mind

Here is Philip Barton of the Gold Standard Institute writing in "The Dawn of Gold":

"A stock of anything has to be started at a moment in time. A stock of 170,000 tonnes does not just suddenly appear. At some point, long ago, the decision was made to begin to hoard gold. No one hoards something that will not hold its value over time. No one would put a dozen eggs or an iron bar in the back shed and expect it to have value fifty years later. The crucial point to understand is that when the original decision was made to begin to acquire and hoard gold, it must have already been regarded as a store of stable value over time, otherwise the decision to store it would not have been made."

Besides central bank buying:

Remonetisation of gold

There are other signs that gold is set to play a bigger role in the monetary system – what I would characterise as the **"remonetisation of gold"**. The Bank for International Settlements (BIS) is proposing to upgrade gold to a Tier 1, zero risk weighted asset (RWA) in line with sovereign debt as part of Basel III regulations on banking supervision. In its "Progress report on Basel III implementation" from April 2012, it noted:

“at national discretion, gold bullion held in own vaults or on an allocated basis to the extent backed by bullion liabilities can be treated as cash and therefore risk-weighted at 0%.”

It was previously risk weighted as a Tier 3 asset at 50%.

In the US, the Office of the Comptroller of the Currency (OCC), Federal Deposit Insurance Corporation (FDIC), in conjunction with the Federal Reserve Board of Governors, US Treasury have also drawn up provisional plans to include gold in risk weighted assets (RWA) at 0% as part of a review of banks' regulatory capital rules. Currently, however, this proposal would only apply to financial institutions with less than \$1bn in assets.

With gold returning to the system, the **question is how will it perform in its role as the “stable benchmark” (Zhou) or “international reference point” (Zoellick)?**

Zoellick even mentioned gold

Following the article, which received a lot of coverage at the time, Zoellick was asked to clarify his comments on gold in a subsequent interview. Firstly, let me pick out a couple of the points he made:

“What I suggested is that gold serves as a key reference point to allow people to assess the relations between different currencies... The system should also consider employing gold as an international reference point of market expectations about inflation, deflation and future currency values.”

Zoellick is not suggesting a return to a gold standards or gold exchange standard of the past, but something new it seems.

Jim Sinclair suggests a link between gold and M3 money supply

On 13 February 2012, Jim Sinclair published some cryptic clues as to how the new system might work, although he seems to separate western currencies from the developing world/BRICS:

“I see the new system utilizing a western world M3, which all member governments will agree to as 100 on the Index of Standard Currency Equilibrium. As this measure rises and falls, governments will agree that the value of their Treasury gold will move in the same direction and percentage according to their GDP ranking.”

Basically a “fudge” without direct convertibility

He likens the new system to the creation of the Rentenmark, which was created in the wake of the monetary breakdown in Weimar Germany, and backed by mortgaged land.

“There will be many variations and tweaks to this concept, but once again a new Rentenmark will be invented as a virtual reserve currency unit tied to a standard (gold) with a shadow of control on western global money supply. A function of control will be by exposure (M3), but not convertibility. Like the Rentenmark, it will be a bit of a farce, but it will work due to the demand for a fix that sits in the shadow of gold but is not convertible.”

A final thought from former broker, Peter Baxter:

“I do believe one of the single greatest tragedies of the 20th century was the calculated repression of the burgeoning Austrian School in favour of the flawed Keynesian model of fiscal monetarism that has proven since inception to be the source of so much systemic dysfunction... These wonderful bandits, Kondratieff, Schumpeter, Cayce, von Mises, Dewey, et al, did lose out to the elitist sponsored Keynesian model at that time, but the veracity of their theorems never died. Their time has arrived now.”

Have you seen this man?

WANTED



**FOR CRIMES
AGAINST THE
LONG WAY**

Source::Bloomberg

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Rating	Definition
Buy	Absolute return expected to be more than 10%
Add	Absolute return expected to be between 5% and 10%
Hold	Absolute return expected to be between -5% and +5%
Reduce	Absolute return expected to be between -5% and -10%
Sell	Absolute return expected to be less than -10%

As from 25 October 2010 the nomenclature of our recommendation was changed. Prior to that time Add recommendations were described as Outperform and Reduce recommendations were described as Underperform.

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Buy	57.4%	59.5%
Add	5.4%	14.3%
Hold	26.4%	0.0%
Reduce	1.7%	0.0%
Sell	2.3%	0.0%
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