in gold we trust .report

June 1, 2017 | Extended Version

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incrementum

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Introduction

Key Takeaways

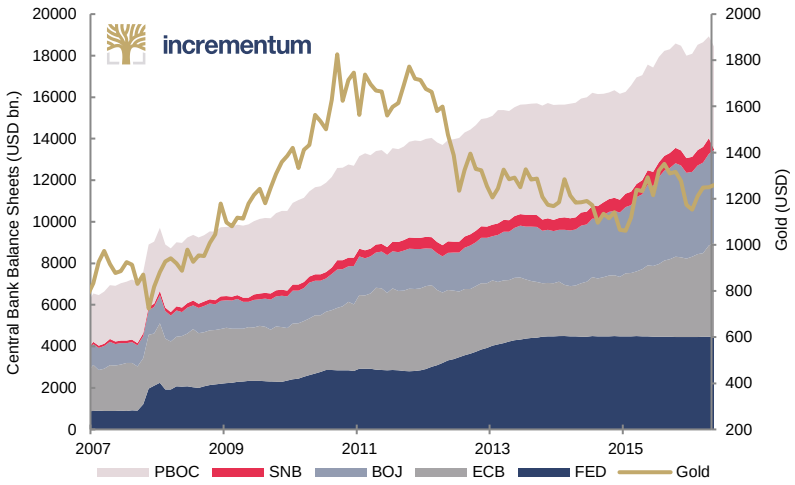
- The 11th annual „In Gold we Trust“-Report once again provides a detailed overview of the relevant topics regarding the gold market.
- Welcome to the world of advanced monetary surrealism! In Q1 2017 alone, the largest central banks created the equivalent of almost USD 1.000 bn. worth of central bank money ex nihilo.
- Low interest rates combined with the pressure to invest and FOMO, have nurtured a treacherous sense of carelessness within many market participants.
- Many signals suggest that we are about to face a big shift within the financial and monetary system.

"It is a case of better having insurance and not needing it, than one day realizing that one needs it but doesn't have it."

Acting-man.com

We live in an age of advanced monetary surrealism. In Q1 2017 alone, the largest central banks created the equivalent of almost USD 1,000 bn. worth of central bank money ex nihilo. Naturally the fresh currency was not used to fund philanthropic projects but to purchase financial securities[1]. Although this ongoing liquidity supernova has temporarily created an uneasy calm in financial markets, we are strongly convinced that the real costs of this monetary madness will reveal themselves down the line.

Base Money inflation and the price of Gold in USD



Source: Bloomberg, Incrementum AG

„...whatever it takes!"
Mario Draghi

We believe that the monetary tsunami created in the past years, consisting of a flood of central bank money and new debt, has created a dangerous illusion: the illusion of a carefree present at the expense of a fragile future. The frivolity displayed by many investors is for example reflected by record-low volatility in equities, which have acquired the nimbus of being without alternative, and is also highlighted by the minimal spreads on corporate and government bonds.

Almost a decade of zero and negative interest rates has atomised any form of risk aversion. While the quantitative easing programmes are still going at full throttle in many places without the media paying much attention, the situation in the USA looks decidedly different: seven years after the Fed funds rate had been set to zero, the first interest rate hike by the Federal Reserve in December 2015 marked the end of the longest period of immobility in terms of interest rate policy in history. To many market participants, this overdue step towards normalising the monetary policy is the confirmation of the much-desired comeback of the US economy.

However, the interest rate reversal that had been announced for years got off to a sluggish start. Market participants became increasingly nervous in 2016 when it started turning out that central banks would not be remotely able to stick to the speed of four interest rate hikes as announced. After the FOMC

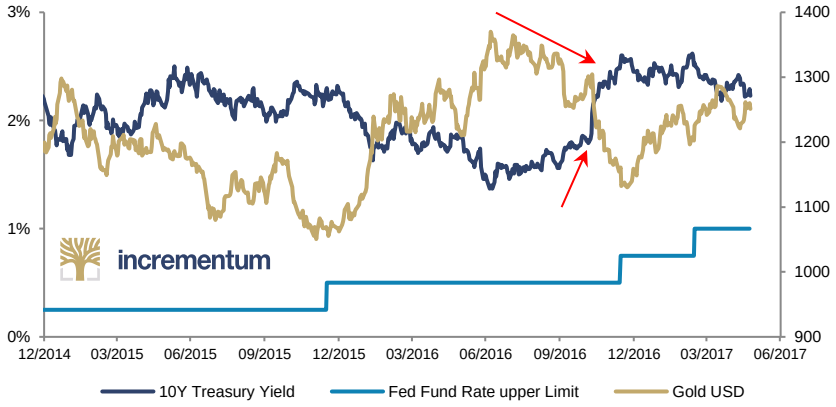
[1] With that amount of money, one could purchase 20 Big Macs for every person on this planet. Notably in Switzerland, the - according to the Big Mac Index - most expensive jurisdiction worldwide. Alternatively, one could also buy one 1/10th oz. Gold coin for every person on the planet. We would recommend the latter.

meeting in March 2016, the first question that CNBC journalist Steve Liesman asked Janet Yellen was:

"Does the Fed have a credibility problem [...]?"[2]

We believe that the absence of the often-quoted sustainable economic recovery is one factor to blame for the passivity of the Fed. The depreciation of the Chinese currency and the still falling yields at the long end of the yield curve in 2016 are two others, as a result of which the Fed had to procrastinate until December 2016.

Mind the Donald: 10Y Yields, Fed Fund Rate (left scale) & Gold (right scale)



Source: Federal Reserve St. Louis, Incrementum AG

"The highly abnormal is becoming uncomfortably normal."
Claudio Borio, BIS

The gold price celebrated a remarkable comeback during this hesitant phase of the Fed. Last year we confidently opened the "In Gold We Trust" report with the line "Gold is back!". We had anticipated the passivity of the Fed as well as the return of the bull market. The gold price seemed to have experienced a sustainable trend reversal in USD, and we felt our bullish stance had just been confirmed.

But our gold(en) optimism was stopped in its tracks again in autumn 2016. The gold price declined significantly, in particular in the last quarter of 2016, even though the maximum drawdown has never exceeded 20%. We can therefore still call the status quo a correction within the confines of a new bull market, but we want to openly admit that we had not foreseen the dent in the gold price performance. Our target price of USD 2,300 for June 2018 may therefore prove overly optimistic. **But what was the trigger of the sudden reverse thrust of the gold price?**

[2] https://youtu.be/aodavML_cB8?t=15m

Source: https://de.wikipedia.org/wiki/Donald_Trump[3]

"There are two ways to be fooled. One is to believe what isn't true; the other is to refuse to believe what is true."
Søren Kierkegaard

Ironically, it was Donald J. Trump. The election of the presidential candidate originally unloved by Wall Street fuelled hopes of a renaissance of America on the basis of a nationalistic growth policy. President Trump brought about a change in sentiment, especially among a class of society that had lost its trust in the economic system and political institutions. Stocks received another boost, and the increase in the gold price was (temporarily) halted.

"It's the economy, stupid."
Bill Clinton

"It's the economic, stupid."
Richard Lugner*
(*Austrian equivalent of Donald Trump)

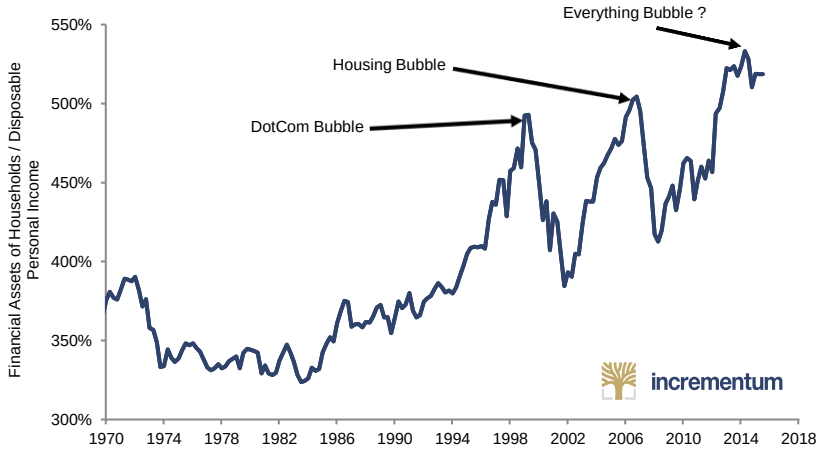
The Fed seems to be keen to use the new euphoria on the markets in order to push the normalisation of monetary policy. Even if the journalistic mainstream is abundantly convinced of the sustainability of the US interest rate reversal, a contradiction is embedded in the narrative of the economic upswing triggered by Trump: if the economic development, as claimed by the Fed in the past years, was actually rosy even *prior* to Trump's victory, the candidate promising in his central message to make America great AGAIN would presumably not have won. **The narrative of a recovering US economy is the basis of the bull market in equities.**

"... Stocks, bonds and real estate have all become as overvalued as we have ever seen any one of them individually in this country. The end result of all of this money printing and interest rate manipulation is the worst economic expansion since the Great Depression and the greatest wealth inequality since that period."
Jesse Felder

The valuation level of the US equity market is nowadays ambitious, to put it mildly - both in absolute numbers and in terms of the economic output. **This prompts the conclusion that the U.S. is caught up for the third time within two decades in an illusionary bubble economy created by money supply inflation and equipped with an expiry date.** In comparison with the earlier two bubbles, however, the excess is not limited to certain sectors (technology in 2000, credit in 2008), but it is omnipresent and includes various asset classes, especially also bonds and (again) property. **In view of the current situation, the renowned analyst Jesse Felder rightly talks about an "Everything Bubble".**[4] From our point of view, the concept of the classic investment portfolio, which calls for shares to satisfy the risk appetite and bonds as safety net, must be critically questioned.

—
3 This is Donald Trump's official presidential photo. Seriously!
4 cf. "Welcome to the everything bubble", Jesse Felder, The Felder Report

The "Everything Bubble": Financial Assets relative to disposable personal income



Source: Incrementum AG, Jesse Felder, Federal Reserve St. Louis

While markets are already celebrating the future successes of Trumponomics, the structural weakness of the US real economy is revealed yet again in the latest growth figures. According to the most recent estimate, the US economy expanded in Q1 2017 by a meagre 1.2 % y/y. In combination with an inflation rate of more than 2%, this means that the U.S. is at the edge of stagflation - a scenario we have warned about on several prior occasions. But markets are obviously taking a different view than we are. At least for now.

"Policy, profit and positioning trends all argue for rotation from deflation to inflation, from 'ZIRP winners' to 'ZIRP losers', from Wall Street to Main Street. As part of this rotation we expect real assets to outperform financial assets."
Michael Hartnett

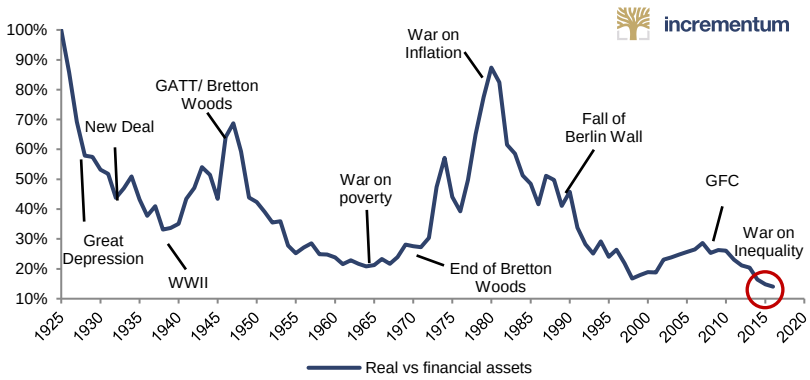
Moreover, the ratio of real assets to financial assets is currently the lowest since 1925.[5] In a study worth reading, Michael Hartnett, chief strategist at Bank of America Merrill Lynch, recommends to "get real", i.e. to reallocate investments from financial assets into real assets.

> *"Today the humiliation is very clearly commodities, while the hubris resides in fixed-income markets"*

as Hartnett explains. Gold, diamonds, and farmland show the highest positive correlation with rising inflation, whereas equities and bonds are negatively correlated with increasing prices, a finding that we have pointed out repeatedly. The political trend towards more protectionism and stepped-up fiscal stimuli will also structurally drive price inflation.[6]

5 Bank of America Merrill Lynch calculates a ratio between real assets (commodities, property and collection items, especially art) and financial assets (shares, long-term government bonds).
6 cf. "Bank of America tells stock investors to get "real" as inflation makes its comeback", Marketwatch.com

Real Assets at all-time lows relative to Financial Assets

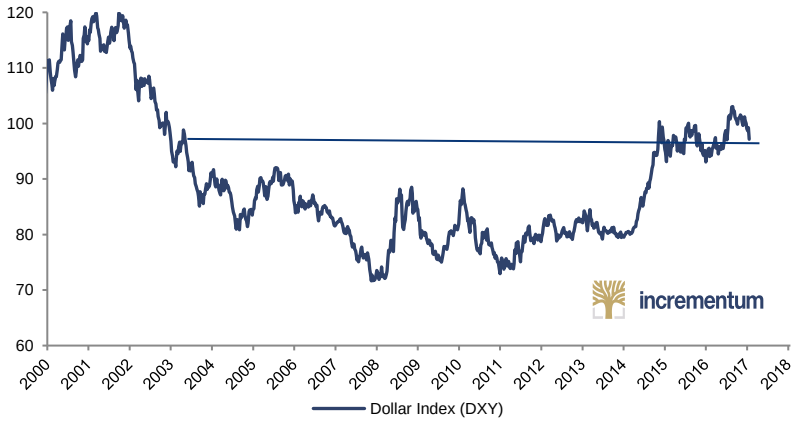


Source: BofA Merrill Lynch Global Investment Strategy, Incrementum AG

"There was a time, not that long ago actually, when it was the economy that drove asset prices like equity and real estate valuations. But today, the causation is viewed, even in policy circles, as running in the opposite direction. It is asset prices that now drive the economy."
Dave Rosenberg

In the past years, rate cuts and other monetary stimuli have affected mainly asset price inflation. Last year, we wrote: *"Sooner or later, the reflation measures will take hold, and asset price inflation will spill over into consumer prices. Given that consumer price inflation cannot be fine-tuned by the central banks at their discretion, a prolonged cycle of price inflation may now be looming ahead."* 2016 might have been the year when price inflation turned the corner. However, the hopes of an economic upswing due to Trumponomics and the strong US dollar have caused inflation pressure to decrease for the time being. **Upcoming recession fears resulting in a U-turn by the Fed, and the consequential depreciation of the US dollar would probably finalise the entry into a new age of inflation. This will be the moment in which gold will begin to shine again.**

Strong dollar supports disinflation: DXY at highest level since 2003



Source: Federal Reserve St. Louis, Incrementum AG

Low interest rates combined with the pressure to invest and FOMO, have nurtured a treacherous sense of carelessness within many market participants. Scenarios such as significantly higher inflation or a recession are currently treated like black swans, although history shows that these events do occur at regular intervals.

"In an economic system, if the goal of the authorities is to reduce some particular risks, then the sum of all these suppressed risks will reappear one day through a massive increase in the systemic risk and this will happen because the future is unknowable."
Karl Popper

Many signals suggest that we are about to face a big shift within the financial and monetary system. Nobody can foresee what it will look like. But an early look at such scenarios creates a good opportunity to come out stronger at the other side of this transition. As Roland Baader brilliantly summed it up: "In the middle of the boisterous summer party, the sensitive ones start feeling the chills."[7] To some degree, we find ourselves in this quote.

Regular readers of our annual report know that we analyse gold as a monetary good and not as a commodity. In the following, we will again take a level-headed look at the bigger picture and conduct a holistic analysis of the gold universe. **We invite you on our annual tour de force and hope that you will be having as good a time reading our 11th annual Gold Report as we are having writing it.**

Yours faithfully,

Ronald-Peter Stöferle and Mark J. Valek

7 cf. "Incrementum Letter to Investors and Outlook 2017"

Where Things Stand

Key Takeaways

- Investor interest in gold and commodities has been gradually picking up (inflows in ETFs, CoT).
- The fundamental and technical picture of gold and commodities has recently improved – 2016 marked the beginning of a new bull market.
- The USD bull market seems to be past its prime.
- A U-turn in the FEDs monetary policy would likely be a trigger for stronger momentum of the gold price.

"Doubt is not a pleasant condition, but certainty is absurd."

Voltaire

At the beginning of our report, we always like to triangulate the status quo of the gold market. We will be taking a critical look at the gold price performance and analyse whether we are in the early stages of a new bull market, as described last year, or whether our fundamental assessment has proven erroneous.

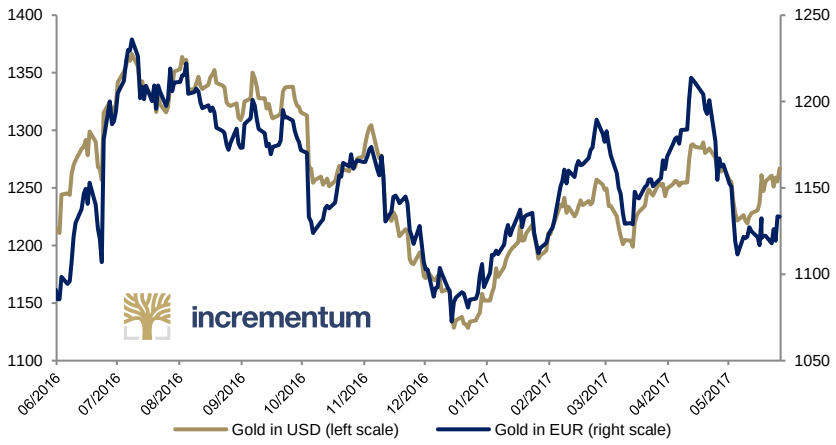
a. Status quo of gold in a currency context

"It's all about relative supply curves – the supply curve for bullion is far more inelastic than is the case for paper money. It really is that simple."
David Rosenberg

At the outset, we would like to go through a number of performance data. The development since the publication of our previous report on 28 June 2016 has been slightly negative, both in terms of euro (-3.4%) and in terms of US dollar (-3%). The full year of 2016 was like day and night. A fantastic first half was followed by a disastrous second half, where the newly won confidence was brutally destroyed. Gold bulls were being tested again, with the market turning into a "pain maximiser". The big caesura in the performance had to do with the election of Donald Trump.

Since the beginning of 2017, the picture has been clearly positive. After a rally from USD 1,150 to almost 1,300 within a few weeks, a correction set in around the middle of April, which now seems to be over.

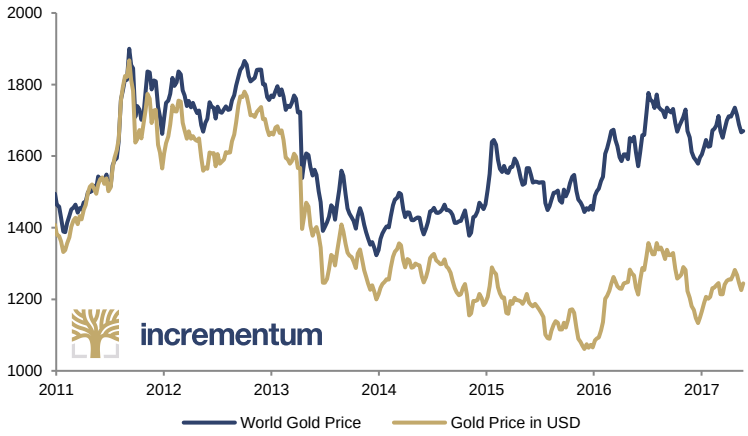
Gold in US dollar and euro since the previous Gold Report



Source: Federal Reserve St. Louis, Incrementum AG

The following chart shows the so-called "world gold price". Here, the gold price is not stated in EUR or USD, but in a trade-weighted external value of the US dollar. As we can see, the price is not that far off its all-time-high of 2011 anymore. The comparison of the world gold price with the USD price reveals that the divergence has increased significantly since 2014. On the one hand, this was due to the expectation that the Fed would implement the announced cycle of rate hikes, on the other hand and at a later stage, it was the consequence of Donald Trump's election and the resulting economic hopes that were fuelling the USD. Given that the gold price in USD hit its low only at the end of 2015, the chart now also shows higher highs in dollar-terms. That said, the still relatively strong US currency continues to be detrimental to the performance of the gold price.

World gold price vs. dollar gold price since 2011



Source: Federal Reserve St. Louis, Incrementum AG

Gold is a classic appreciation currency

If we expand the currency spectrum by analysing the gold price in the most important currencies, our positive attitude towards gold is confirmed. **The full year 2016 was clearly positive for gold in all important global currencies.** At +29.7%, the development in the British pound is particularly remarkable.

The performance in this secular bull market is still impressive. The average annual performance from 2001 to 2017 has been 10.15%. **Gold outperformed practically every other asset class and especially every other currency by a significant degree, despite intermittent (sometimes sharp) corrections.** Since the beginning of 2017, the development is quite robust, too. On average gold is up 5.88% ytd.

Gold performance since 2001 in various currencies (%)

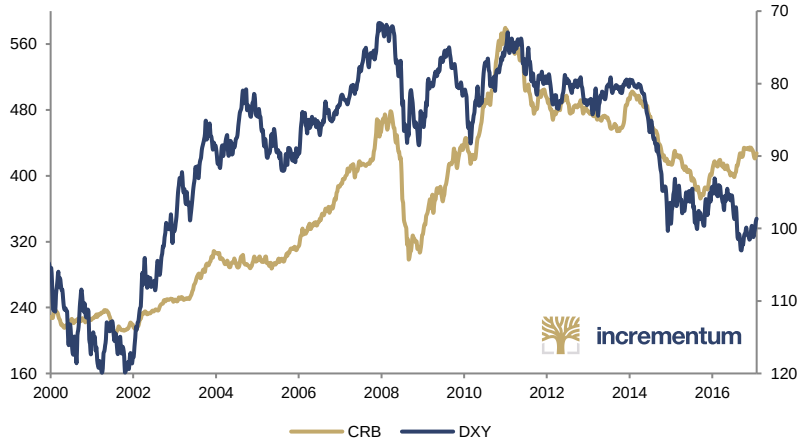
	EUR	USD	GBP	AUD	CAD	CNY	JPY	CHF	INR	Mean
2001	8.10%	2.50%	5.40%	11.30%	8.80%	2.50%	17.40%	5.00%	5.80%	**7.42%**
2002	5.90%	24.70%	12.70%	13.50%	23.70%	24.80%	13.00%	3.90%	24.00%	**16.24%**
2003	-0.50%	19.60%	7.90%	-10.50%	-2.20%	19.50%	7.90%	7.00%	13.50%	**6.91%**
2004	-2.10%	5.20%	-2.00%	1.40%	-2.00%	5.20%	0.90%	-3.00%	0.90%	**0.50%**
2005	35.10%	18.20%	31.80%	25.60%	14.50%	15.20%	35.70%	36.20%	22.80%	**26.12%**
2006	10.20%	22.80%	7.80%	14.40%	22.80%	18.80%	24.00%	13.90%	20.58%	**17.24%**
2007	18.80%	31.40%	29.70%	18.10%	11.50%	22.90%	23.40%	22.10%	17.40%	**21.70%**
2008	11.00%	5.80%	43.70%	33.00%	31.10%	-1.00%	-14.00%	-0.30%	30.50%	**15.53%**
2009	20.50%	23.90%	12.10%	-3.60%	5.90%	24.00%	27.10%	20.30%	18.40%	**16.51%**
2010	39.20%	29.80%	36.30%	15.10%	24.30%	25.30%	13.90%	17.40%	25.30%	**25.18%**
2011	12.70%	10.20%	9.20%	8.80%	11.90%	3.30%	3.90%	10.20%	30.40%	**11.18%**
2012	6.80%	7.00%	2.20%	5.40%	4.30%	6.20%	20.70%	4.20%	10.30%	**7.46%**
2013	-31.20%	-23.20%	-28.80%	-18.50%	-23.30%	-30.30%	-12.80%	-30.20%	-19.00%	**-24.14%**
2014	12.10%	-1.50%	5.00%	7.70%	7.90%	1.20%	12.30%	9.90%	0.80%	**6.16%**
2015	-0.30%	-10.40%	-5.20%	0.40%	7.50%	-6.20%	-10.1%	-9.90%	-5.90%	**-3.75%**
2016	12.04%	8.50%	29.70%	10.10%	5.50%	16.50%	5.40%	10.40%	11.50%	**12.27%**
2017	**3.02%**	**10.22%**	**5.63%**	**6.24%**	**10.35%**	**8.45%**	**4.24%**	**4.78%**	**4.32%**	**5.88%**
Mean	**10.50%**	**11.56%**	**12.50%**	**9.36%**	**10.37%**	**9.67%**	**10.21%**	**8.36%**	**13.87%**	**10.15%**

Source: Federal Reserve St. Louis, Goldprice.org, Incrementum AG

Our long-time readers know: we believe that commodities constitute the antidote to the US dollar. There are interdependencies between commodity prices and the US dollar, with the causality originating from the US

dollar more strongly than is generally assumed. That can also be explained by the dollar-centric monetary system, which we will discuss at length further down. If the US dollar depreciates against gold or commodities, inflationary tendencies emerge on a global scale.

CRB index (left scale) and dollar index (right scale, inverted)

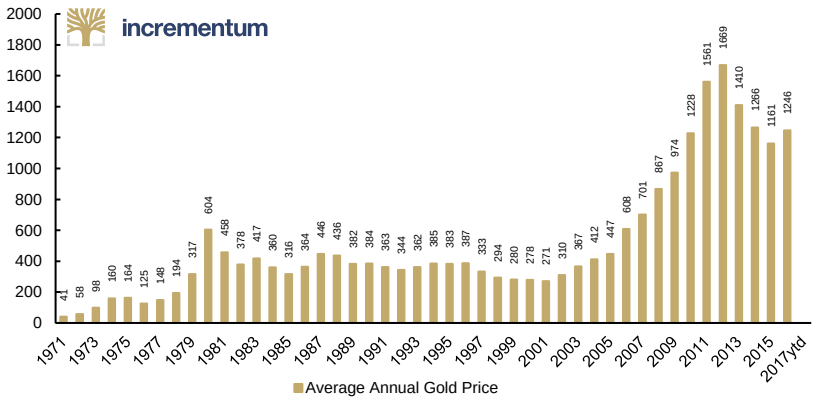


Source: Bloomberg, Incrementum AG

"The decline of the value of each dollar is in exact proportion to the gain in the number of them."
Keith Weiner

Let us now look farther back into history. Since 15 August 1971, i.e. the beginning of the new monetary age, the annualised increase in the price of gold has been 8%. The *real* appreciation of gold relative to the US dollar averages 4.5% per year. The following chart shows annual average gold prices in USD since 1971, and puts the recent gold price correction into a long-term perspective. It clearly illustrates the benefit of a regular accumulation of gold ("gold savings plan") as a long-term strategy, which takes advantage of the cost average effect of regular acquisitions.

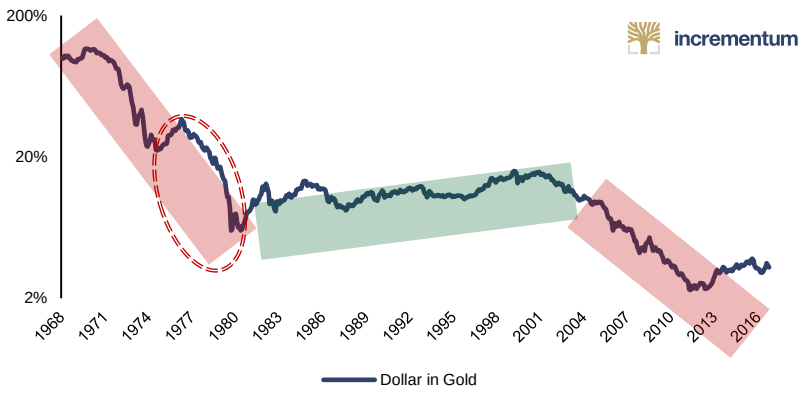
Average annual gold price (USD)



Source: Federal Reserve St. Louis, Incrementum AG

Sometimes a change in perspective leads to a new realisation: a reversal of the ratio of the gold price in USD or EUR yields the ratio of the purchase power of the paper currency to gold. **The following long-term analysis shows that the purchase power decrease of the dollar vs. gold comes in long cycles.**

Dollar measured in terms of gold: are we at the end of the mid-cycle



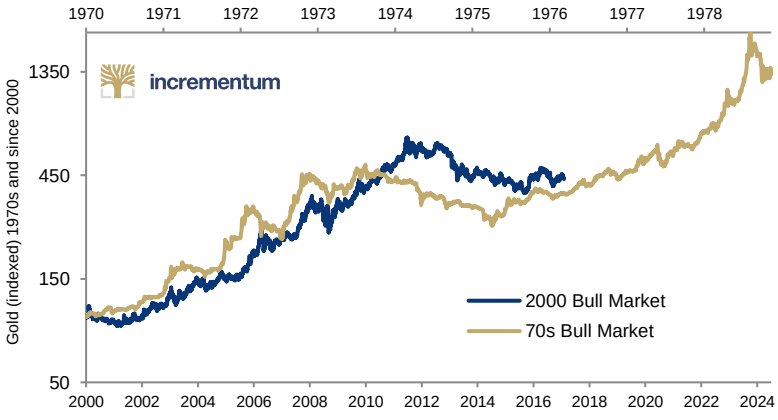
Source: Federal Reserve St. Louis, Incrementum AG

"Investments that are denominated in a given currency include money-market funds, bonds, mortgages, bank deposits, and other instruments. Most of these currency-based investments are thought of as 'safe.' In truth, they are among the most dangerous of assets. Their beta may be zero, but their risk is huge."
Warren Buffett

The chart illustrates the fact that the current depreciation phase has been very moderate in comparison with the 1970s. The final trend acceleration that we can see in the 1970s (as marked by a circle in the chart) has not happened yet. In terms of timeline, the short-term dollar strength reminds us of the prior period around the middle of the 1970s, when gold was being sold off and the US dollar appreciated significantly within the context of two years of disinflation coupled with a weak economic improvement. **From our point of view, the similarities to this mid-cycle correction are striking.**

The following chart also confirms the similarities between the 1970s and the status quo. The analysis reveals the fact that the bear market since 2011 has been following largely the same structure and depth as the mid-cycle correction from 1974 to 1976. However, we can see that the duration of both corrections diverges significantly.

Gold bull market 1970s vs. 2000 to date

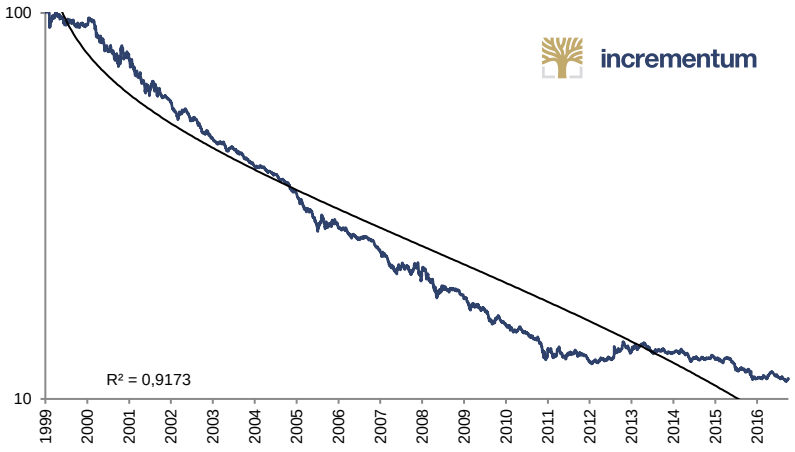


Source: Federal Reserve Fred, Incrementum AG

The following depreciation chart is also worth a look. It illustrates the continuous downward trend of the purchase power as measured by a basket of different

currencies[8] relative to gold. The downward trend of the equally weighted currency basket has recently flattened.

Currency basket measured in gold: long-term downward trend intact, but currently bottoming out? (log scale)

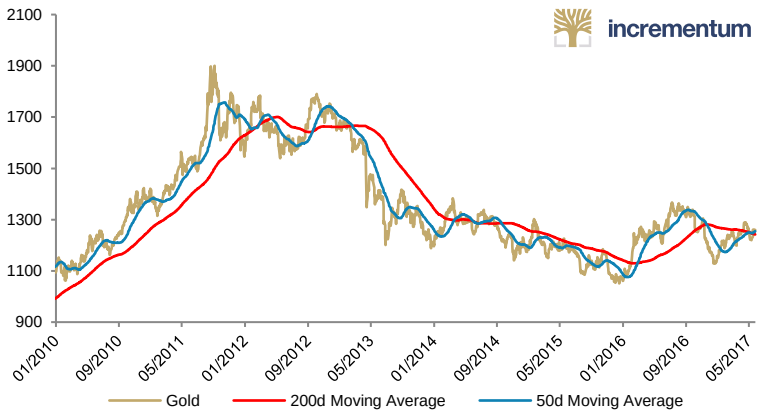


Source: Bloomberg, Incrementum AG

"100 years ago, the dollar was worth 1555mg of gold. Today, it is worth about 25mg. The long-term price target is 0."
Keith Weiner

We can conclude that the gold price rises in the long run both in dollar terms and, more significantly so, in terms of an international currency basket. Vice versa, the purchase power of paper money in gold is on the decline, which is even more obvious regarding the basket than in terms of the globally leading currency, the US dollar.

Gold in USD, 200d MA and 50d MA



Source: Federal Reserve St. Louis, Incrementum AG

Gold is in a bull market again, despite the current strength of the US dollar and the "Trump slump". The stronger increase of the gold price in terms of the currency basket also confirms this assessment. We therefore stick to our statement from last year, according to which gold has entered the early stages of a new bull market. The development of inflation dynamics and Fed policy will be the decisive factors going forward.

8 The basket consists of: US dollar, euro, Swiss franc, Japanese yen, renminbi, Indian rupee, British pound, Canadian dollar and Australian dollar.

b. Status quo of gold relative to equities and commodities

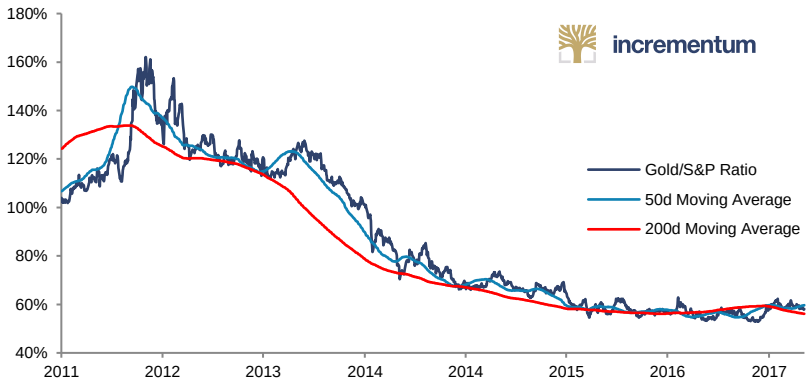
"If bond markets are smoking weed, then the stock market appears to be hooked on crack."
James Montier

Not only the absolute, but also the relative development is important for a comprehensive assessment of the status quo of the gold market. Along with gold, silver, and mining shares, industrial metals such as zinc, nickel, copper and energy commodities (especially coal and oil) marked stellar performances last year. All of this happened in an environment where the US dollar climbed to a 14-year high. **We regard this as a remarkable development and as a prime example of a bull market, whose starting gun has not been heard yet by the majority of investors.**

"Sell economic ignorance; buy gold."
Tim Price

We consider a bullish stock market currently as the most significant opportunity cost for gold. Therefore, a clear break-out of the gold price should only be occurring amid a stagnating or weaker equity market. If we now compare the gold price performance with the development of equity prices, we can see that the relative weakness of gold seems to be slowly coming to an end. Last year we had already noticed that the intensity of the upward trend had declined significantly. After almost five years of underperformance relative to the broad equity market, the tables might slowly be turning now in favour of gold.

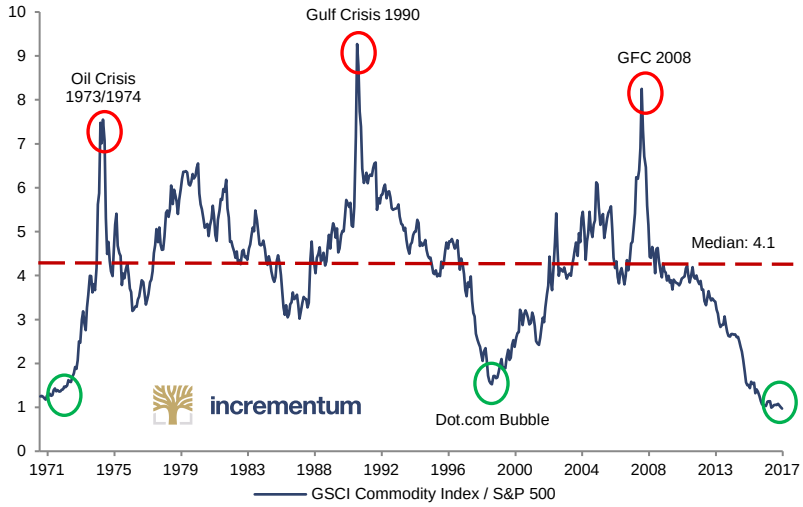
Gold/S&P500 ratio and 50-day and 200-day Moving Averages



Source: Federal Reserve St. Louis, Incrementum AG

In a historical context, the relative valuation of commodities to equities seems extremely low. In relation to the S&P500, the GSCI commodity index is currently trading at the lowest level in 50 years. Also, the ratio sits significantly below the long-term median of 4.1. Following the notion of mean reversion, we should be seeing attractive investment opportunities.

GSCI/S&P500 ratio: equities expensive, commodities cheap?



Source: Dr. Torsten Dennin, Incrementum AG

In absolute terms, the scene seems set for a new bull market for commodities. According to Ned Davis Research, commodities gained 217% on average over the period of a bull market. This would mean that we are currently only at the beginning of the development, as the Bloomberg Commodity index is only 34% above its low of the beginning of 2016 as we write.

Table: historical bull and bear markets

Commodity Bull Super-Cycles		
	Percentage Gain	Length (Years)
1802-1814	68.5%	12.0
1843-1864	200.0%	21.4
1896-1920	267.6%	23.9
1933-1951	329.9%	18.0
1972-1980	168.4%	7.9
1999-2011	270.0%	12.1
Average Bull	**217.4%**	**15.9**

Commodity Bear Super-Cycles		
	Percentage Gain	Length (Years)
1814-1843	-61.7%	28.3
1864-1896	-70.2%	31.8
1920-1933	-63.5%	12.8
1951-1972	-38.4%	21.0
1980-1999	-34.5%	19.1
Current Bear	-37.6%	5.8
Average Bear	**-51.0%**	**19.8**

Source: Ned Davis Research Group

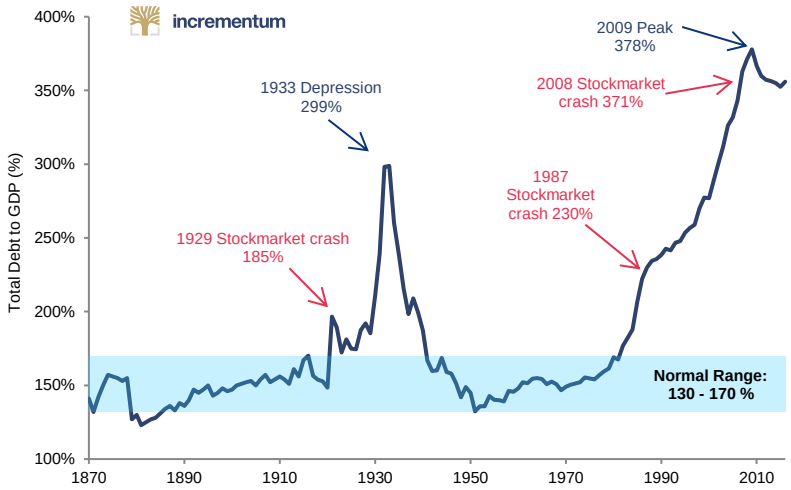
c. Systemic over-indebtedness and inflation

"To prevent busts, one must stop booms from happening in the first place by taking away the punchbowl of credit well before the party has gotten out of hand. So wisdom consists in consciously renouncing immoderate greatness."
William Ophuls

As always, we feel it is important to point out that the rise of already excessive debt levels progresses unnoticed. Let us look at the USA for example. The ratio of total debt to the US GDP has been around 150% in the past 150 years. Historically, there have only been two significant exceptions: the 1920s ("the roaring twenties"), where a strong expansion of credit laid the foundation of the stock market crash and the Great Depression; and the current phase, which originated in the 1970s.

Unlike October 1929, even more debt was encouraged to build up in the economy after the 1987 stock market crash, driven by Alan Greenspan's loose interest rate policy. In 2009, the ratio was at 378%, reaching an all-time-high. Since then, gentle efforts have been made to deleverage, but at 365% we are still in unhealthy regions. **No trace therefore of deleveraging and austerity.**

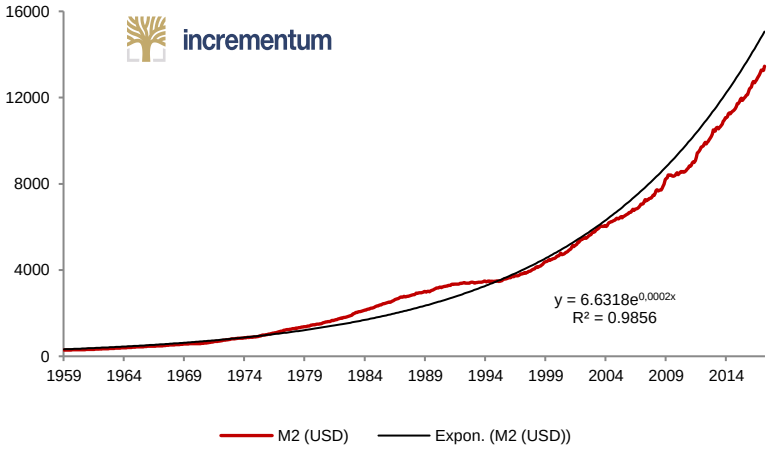
Total US credit market debt in % of GDP



Source: Dr. David Evans, www.sciencespeak.com, Incrementum AG

In today's strongly leveraged fractional reserve banking system, a strong credit deflation would come with shattering consequences for the real economy. In the event of an unhindered reversal of the credit expansion, money supply deflation would have fatal consequences for large parts of the banking system. **The permanent expansion of money and credit supply is becoming an end in itself to our monetary system.**

The exponential inflation of M2 money supply (in USD bn)



Source: Federal Reserve St. Louis, Incrementum AG

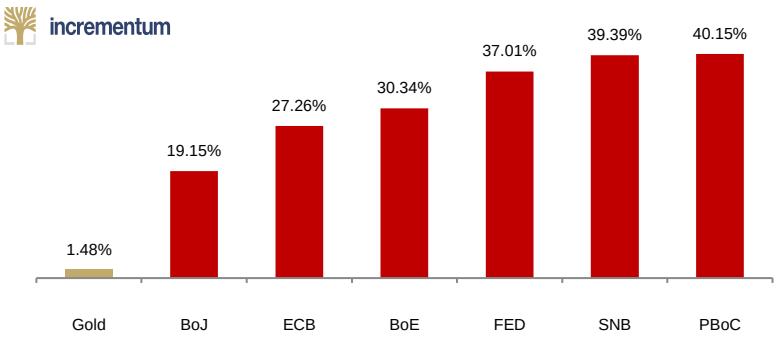
"Negative interest rates are ridiculous, particularly in a fight against deflation. They ARE deflation."
Jeff Gundlach

This is probably the real reason why deflation is nowadays the nemesis of every central banker. The goal of every organism, every human being, and every bureaucracy is to maximize his chances of survival. To this extent, deflation constitutes an existential threat to the current monetary system that needs to be fought *at all costs*. To gloss over the inherent instability of the credit system, the existing credit deflation will be compensated by extremely expansive central bank policies. **We think this is a tightrope walk.**

"Over the years, all the governments in the worlds, having discovered that gold is, like, rare, decided that it would be more convenient to back their money with something that is easier to come by, namely: nothing."
Dave Barry

The central banks try to fine-tune this tightrope walk between deflation and inflation. The following chart shows the annual growth rates of central bank balance sheets since 2003. Evidently the Bank of Japan has been pursuing a *relatively* restive central bank policy. The ECB, too, has been relatively restrictive with an annual inflation rate of "only" 27%. The People's Bank of China holds the title as inflation world champion, closely followed by the Swiss central bank and the Federal Reserve. By comparison, the stock of gold has only been growing by an annual 1.48%. **This underlines the relative scarcity of gold in comparison with fiat currencies that can be inflated at will.**

Annualised rate of change of central bank balance sheets vs. annual change of gold reserves (2003-2017)



Source: FRED, SNB, BOE, PBPC, Incrementum AG

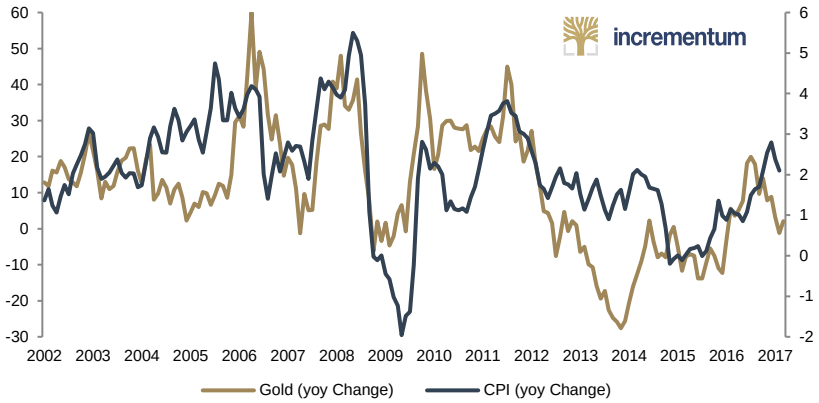
"The Earth revolves around the Sun, and societies revolve around Gold. Human societies are chrysocentric."
Philip Barton

According to our esteemed colleagues at Flossbach von Storch, the central bank money supply in the Eurozone, Japan, the UK, and Switzerland alone is currently growing at 16 times the pace of global gold production. Some 800 tonnes of gold are produced every quarter, which amounts to USD 33bn. In comparison with the creation of money, this seems almost ridiculously low: in Q4 2016, the most active central banks bought USD 545bn worth of securities, which was a new record level.

"One simple rule to follow: Determine what is best for the government and know that is what the powers are working to make happen. Inflation is what is best for a government with enormous debt."
Ayn Rand

Now let us look at the development of the inflationary tendencies, which are crucial for the gold price. Rising rates of inflation generally translate into a positive environment for the gold price, whereas falling rates (i.e. disinflation) represent a negative environment - as is also illustrated by the following chart. From late summer 2011 to mid-2015, price inflation was clearly recessive; since then, it has been on the rise. In the short run, the base effect of inflation should now be subsiding again. From our point of view, a continued rise in inflation would require rising commodity prices, particularly a stronger oil price.

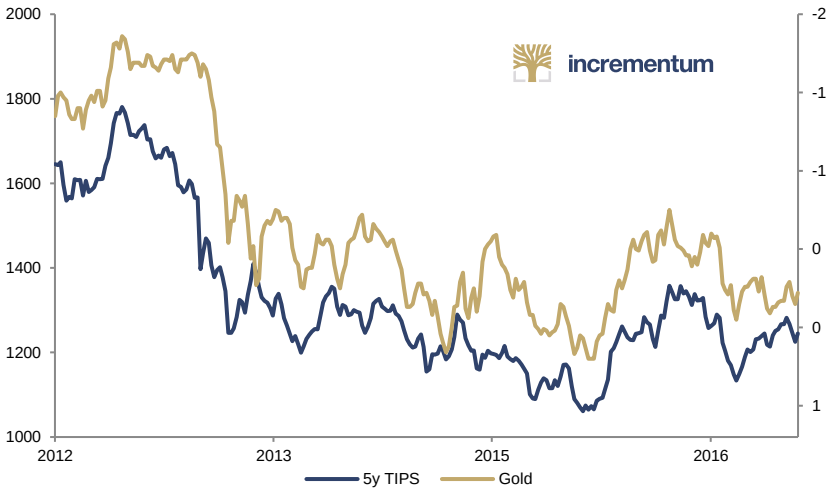
Gold price (rate of change in %, left scale) and CPI (%, right scale)



Source: Federal Reserve St. Louis, Incrementum AG

The yields of inflation-protected bonds also display an extremely high negative correlation with the gold price. A comparison of the gold price with the real yields of the 5Y inflation-protected US Treasuries (TIPS) reveals that the spike of the gold price was accompanied by the pricing-in of rising inflation expectations.

Gold (left scale) vs. 5Y TIPS (right scale, inverted)



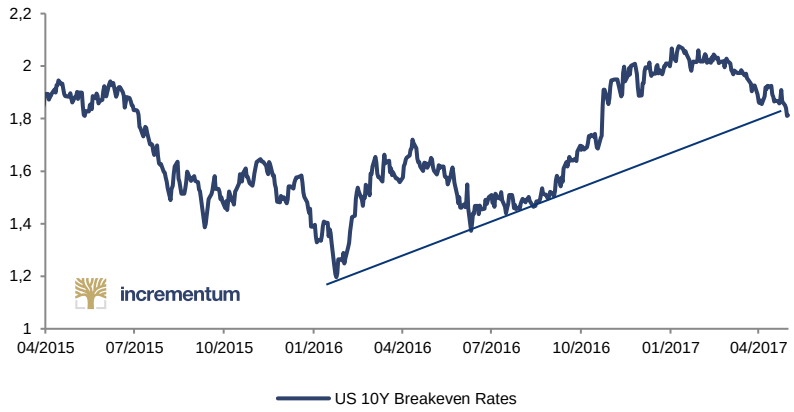
Source: Federal Reserve St. Louis, Incrementum AG

"If you impose inflation on stagnation, you get stagflation."
Alan Greenspan

The inflation rate currently priced in by US bonds currently also signals falling demand for inflation protection. Since the beginning of the year, worries about inflation have been on a gradual decline. PCE core inflation, the indicator favoured by the Fed, has recently fallen to 1.56%. This does make it hard for the Fed to keep raising rates beyond June. **And this does not even consider a possible "hot autumn" 2017, which might bring along economic risks.**[9]

9 cf. Wellenreiter Invest, 8 May 2017 edition

US 10Y Breakeven Rates



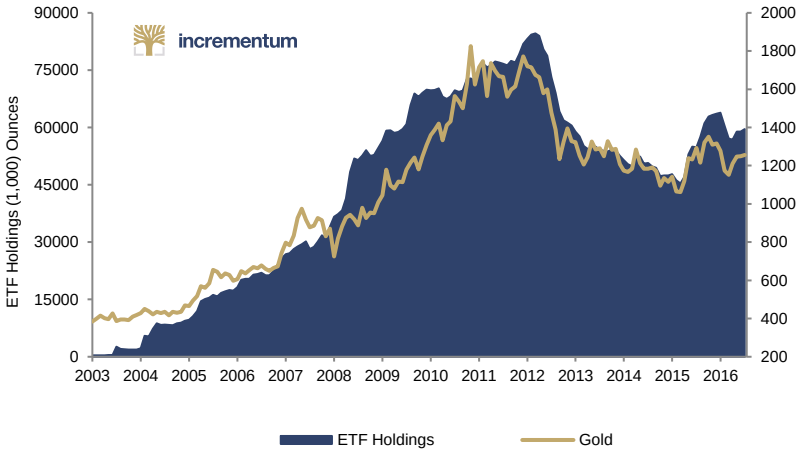
Source: Federal Reserve St. Louis, Wellenreiter Invest, Incrementum AG

d. Flows and liquidity ratios

"The relevance of gold is not in its price but in its ownership... Participating in a price movement is not the same as owning an asset."
Anthony Deden

Inflows into gold ETFs have been picking up since the beginning of 2016. To us, this key ratio represents Western financial investors who choose ETFs as primary instrument to manage their gold exposure. In spite of the general trend reversal, the euphoria revolving around Donald Trump has left its marks in this area as well.

ETF holdings (in 1,000 ounces) vs. gold price (right scale)



Source: Bloomberg, Incrementum AG

As far as the willingness to take risk by investors is concerned, we find the ratio of the Pro Shares Ultra Gold (UGL), i.e. the gold ETF leveraged by a factor of 2x, and the GLD, which illustrates the development of gold 1:1, highly interesting. A rising ratio means that investors are becoming more aggressive and are funneling more of their capital into the leveraged ETF. The chart illustrates the fact that a double-bottom has formed, which is also an indicator of a trend reversal.[10]

[10] cf. "Cycles Research", Bill Sarubbi

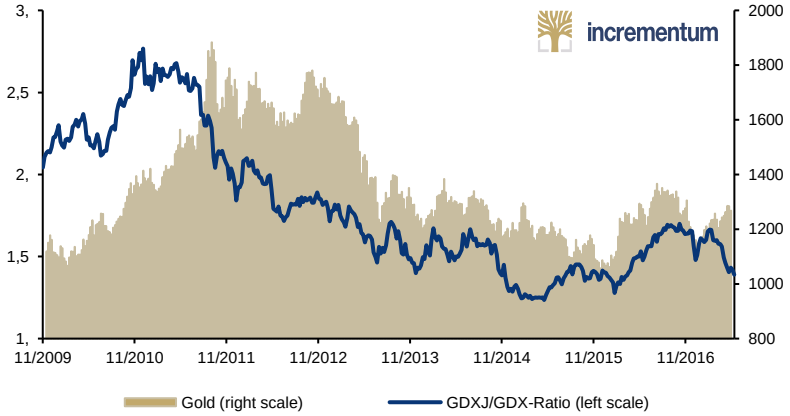
UGL/GLD-Ratio: Double bottom?

Source: Bloomberg, Cycles Research, Incrementum AG

Mining shares also constitute an extremely reliable trend indicator for the price of gold. **In the past years, we have established the following hypothesis: gold bull markets have to be confirmed by mining shares.**

Let us now go a level deeper and look at the risk tolerance within the mining sector. The GDXJ/GDX ratio offers a revealing indicator to this end. The GDX contains mostly large-cap gold producers, while the GDXJ includes the riskier junior and small-cap titles and thus comes with a significantly higher beta. A rising ratio line implies relative strength on the part of the junior players. This indicates investors' increasing willingness to assume risks. At the moment, we can see that the ratio has formed a negative divergence. This is definitely a warning sign for the price of gold.

GDXJ/GDX ratio (left scale) vs. gold price (right scale)



Source: Acting-man.com, Investing.com, Incrementum AG

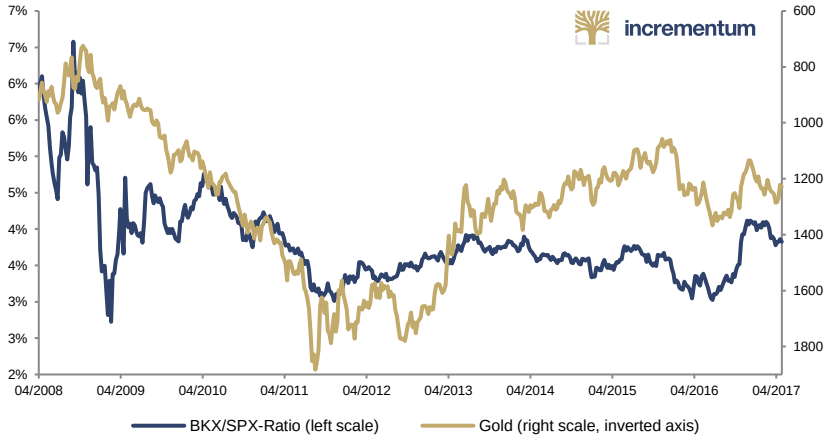
"Out on the edge you see all kinds of things you can't see from the center. Big, undreamed-of things – the people on the edge see them first."
Kurt Vonnegut

The ratio of the broad equity market (S&P 500) and financial shares (BKX index) represents another insightful - and little known - indicator.[11] The health of the banking system is an essential factor of gold demand. To this extent, the ratio illustrates the trust in the banking system. Given that gold is an investment asset without counterparty risk, demand should be

[11] The indicator was created by Steven Saville, the author of the highly recommended investment letter "The Speculative Investor"

rising when trust in financials is falling (i.e. the risk is rising) and vice versa. Indeed, the following chart highlights the fact that the path of the ratio is largely synchronised with the gold price.

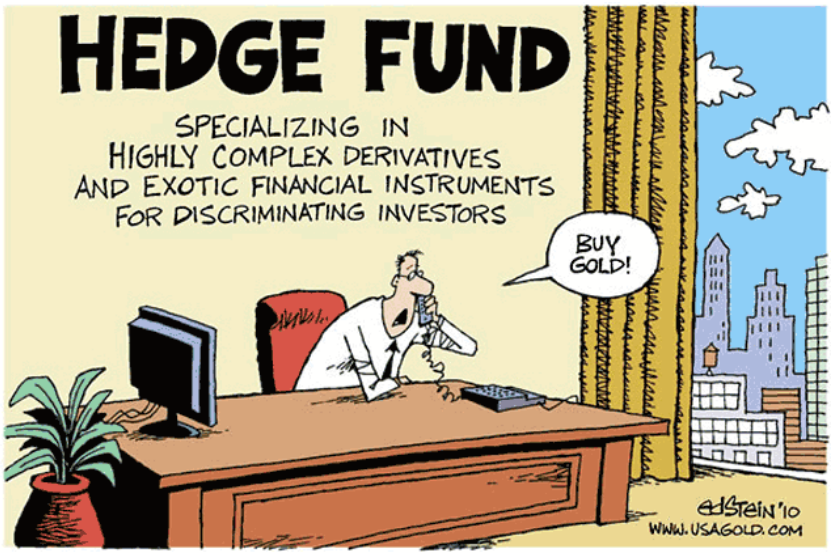
SPX/BKX ratio(left scale) and gold price (right scale, inverted)



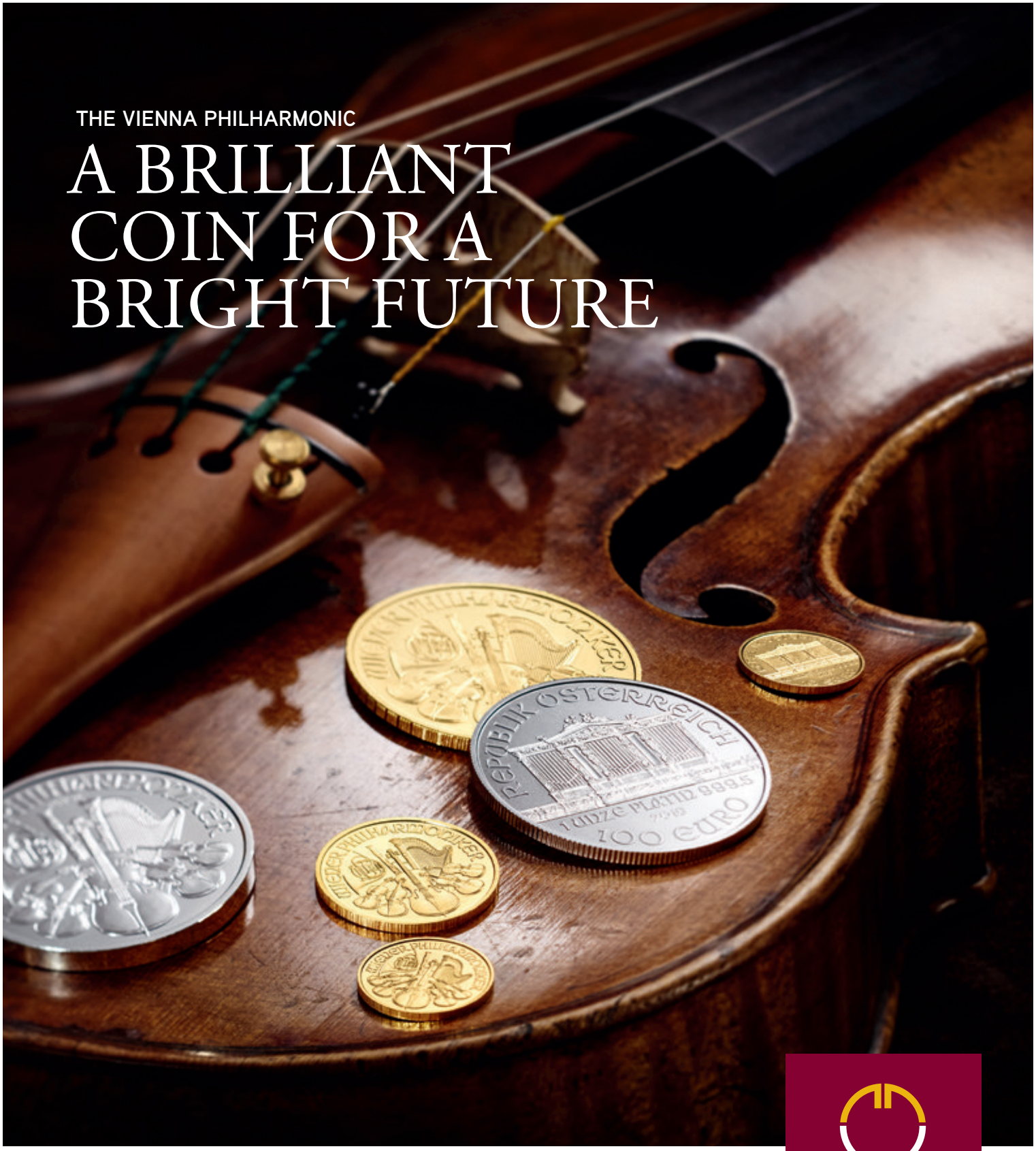
Source: Acting-man.com, Investing.com, Incrementum AG

Summary: Where we stand

The gold price showed a clear sign of life in 2016. The surprising election of Donald Trump was a game changer for financial markets as well as for the gold price. The current consensus opinion expects the normalisation of monetary policy to continue successfully. **As we will discuss in the next chapter, we do not believe in the current economic goldilocks-scenario.**



Source: Ed Stein, www.usagold.com



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White, Gray and Black Swans

Key Takeaways

- Price inflation and a US recession are two risks, which are currently not expected by market participants at all.
- Several signals indicate that a US-recession is far more likely during the next 18-24 months then generally expected.
- Gold has the potential to deliver excellent performance in case of various kind of black and gray swan events.

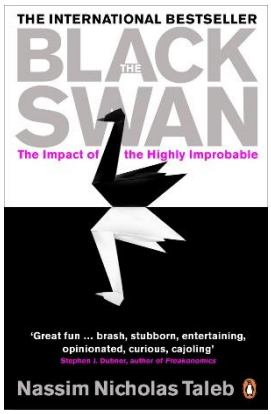
"The two main risk factors for the average portfolio are less than expected growth and more than expected inflation."

Ray Dalio

a. The Black Swan

"Most financial traders are picking pennies in front a steamroller exposing themselves to the high-impact rare event yet sleeping like babies, unaware of it."
Nassim Taleb

The first edition of the later bestseller *The Black Swan* was published in the summer of 2007. Former derivatives trader Nassim Taleb discusses unforeseeable events in the book (which is well worth reading), which result in extreme – both positive and negative – consequences. Shortly after the book was published, a financial crisis of monumental proportions unexpectedly broke out. In many ways, the event was deemed a quite impressive example of a "black swan". Due to the success of Taleb's book, the term „Black Swan", knowledge of which was previously largely confined to academic circles, became a part of everyday vocabulary.



What characterizes a "black swan event" is that it is not only highly improbable, but is also ex-ante unimaginable for the general public. It is therefore almost impossible to prepare for the occurrence of such events. **The consequences of such events are nevertheless extreme.**

"Some things benefit from shocks; they thrive and grow when exposed to volatility, randomness, disorder, and stressors and love adventure, risk, and uncertainty."
Nassim Taleb

Based on the "black swan" concept, analysts have for some time increasingly often talked about **"gray swans".** The term describes an event that is also considered highly unlikely and has significant effects as well, but is at least imaginable ex-ante, because similar events have already occurred in the past. It is therefore possible to at least prepare along general lines for such events. All other events are white swans. White swans comprise events which it is possible to expect, regardless of whether they are relatively improbable or probable events.

The future is always uncertain. It is nevertheless possible – and sensible – to gather and interpret information in order to draw up different future scenarios and consider reasons both for and against their potential occurrence.

Generally speaking, the surge in total indebtedness and money supply aggregates has made the uncovered monetary system even more fragile than it already is based on its fundamental nature. In the wake of the many non-conventional monetary policy measures implemented by central banks, it is important that the belatedly begun normalization of US monetary policy succeeds in order to maintain investor confidence. We will examine potential scenarios that are liable to cut the normalization effort short, which would ultimately lead to systemic upheaval. Naturally, such a development would have a significant effect on the gold price.

In this context, we would also recommend Taleb's book *Antifragile: Things That Gain From Disorder*, published in 2012. Moreover, in last year's "*In Gold We Trust*" report, we inter alia discussed whether gold can contribute to boosting a portfolio's anti-fragility.[12]

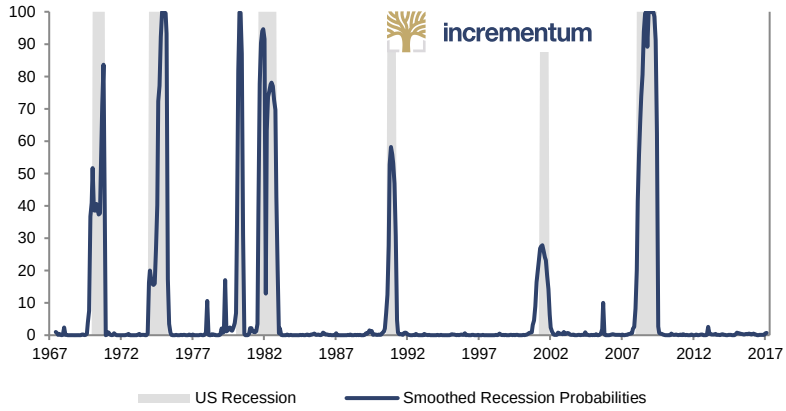
[12] See: "In Gold we Trust"-Report 2016, "Antifragile investing with gold"

b. A Recession in the US – A White Swan

"We are living in a fragile interim period between the Great Financial Crisis and another crisis that is likely to be no less (and may possible be even more) severe."
Thomas Mayer

It is widely acknowledged that a US recession represents one of the greatest extant risk factors for international investors. In our opinion financial market participants currently display a suspiciously pronounced degree of complacency. **The probability of an approaching recession is currently completely disregarded and is priced into markets as though it were a gray or black swan.** The Fed publishes a monthly chart of smoothed US recession probabilities based on a model by Marcelle Chauvet[13] - at the beginning of May, it stood at a mere 0.68%.

US Recession Probabilities

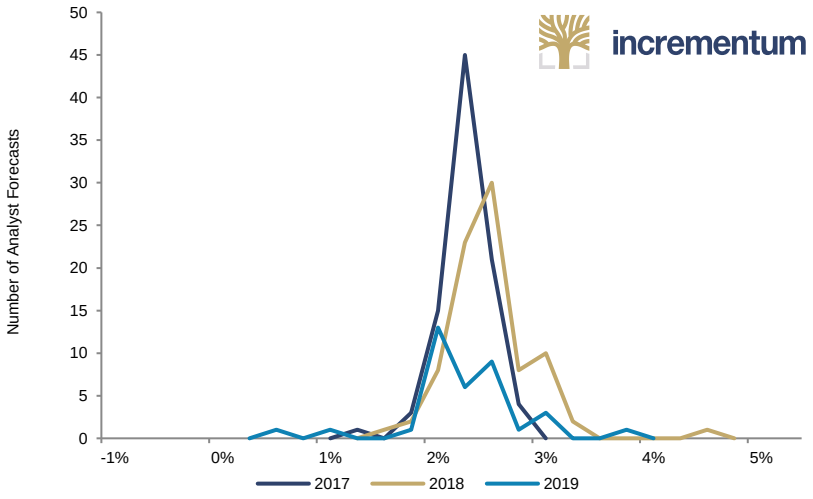


Source: Federal Reserve Bank St. Louis

"We really can't forecast all that well, and yet we pretend that we can, but we really can't."
Alan Greenspan

Of 89 economists surveyed by Bloomberg, not a single one currently expects a GDP contraction in 2017, 2018 or 2019. The median expected growth rate in these years ranges from 2.2 to 2.4 percent.

Bloomberg Consensus: Out of 89 analysts none expects a recession

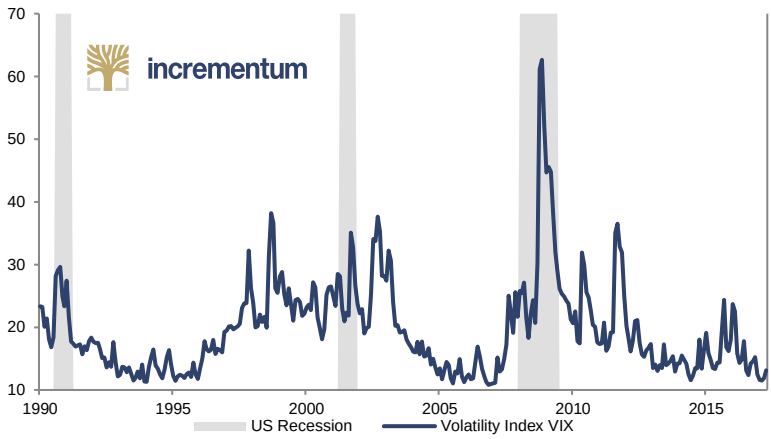


Source: Bloomberg, Incrementum AG

[13] See http://faculty.ucr.edu/~chauvet/ier.pdf

The extremely high degree of confidence in the economy's robustness is also reflected by various market-based risk indicators. The last time the VIX (a measure of the implied volatility of a range of S&P 500 options) was close to today's levels was in 2007 shortly before the beginning of the crisis. In fact, recently the measure hit a new 27 year low (which in turn was one of the lowest levels ever recorded).

VIX-Index & Recessions



Source: Bloomberg, Incrementum AG

"..difficult to get a man to understand something when his salary is dependent upon his not understanding it."
Upton Sinclair

A similar message is conveyed by credit spreads, which are at historically extremely low levels, as well as margin debt, which is at a record high and far in excess of previous peaks. Numerous ratios also document the nonchalance of investors. Mutual funds hold record low amounts of cash relative to their assets, retail money market fund assets are close to a record low relative to the stock market's total capitalization (anything that is currently merely "close" to a record low was at a record low at some point in 2015/16).

"Suppressed volatility always leads to hypervolatility."
Raoul Pal

From an anecdotal perspective one sometimes gets the impression that quite a few people are actually concerned about the downside potential of the economy and the stock market. After all, the market is at one of the highest levels of valuation ever recorded – only the readings at two or three of the most momentous peaks in market history are still comparable, and this is not exactly a secret. Data related to positioning as well as assorted sentiment surveys fail to reflect any of these occasionally verbalized concerns. In fact, the sheer persistence of unheard of extremes in a number of these indicators has become one of the most astonishing hallmarks of the current asset bubble.

As an example, assets invested in bearish Rydex strategies are not only roughly 95% below their peak levels of the early 2000s, they are in fact also 60% below the lowest levels recorded at the top of the technology bubble that flamed out in the year 2000 – and current levels were already seen in 2015 for the first time (as an aside: something that is down 95% from its peak has been cut in half four times and then fallen by 20% for good measure). Funds held in Rydex money market funds are also at record lows in both absolute and relative terms. When comparing bullish assets to bearish and neutral ones, the records recorded in recent years dwarf the previous extremes of 2000 by up to 100% (incidentally, that was once considered unimaginable). While the Rydex fund universe is quite small relative to

the market as a whole, it has always provided a fairly reliable snapshot of overall sentiment.

In the same vein, the weekly NAAIM survey of investment managers, which allows respondents to report their positioning in a range from "200% short" to "200% long", showed on several occasions over the past year that the most "bearish" manager was in fact net long.

The most important message from all these data is not necessarily that everybody is wildly bullish, but rather that no-one seems to perceive any downside risk. It doesn't really matter which indicators one cares to examine - the same picture emerges in nearly every case. It seems certainly fair to say that if the economic and investment climate were to turn hostile, the surprise would be vast.

The Prolonged Upswing

"As sure as the spring will follow the winter, prosperity and economi growth will follow recession."
Bo Bennett

In early 2016 we already alerted subscribers to our research publications[14] in our chart book "*Who's Afraid of Recession*"[15] that a number of indicators signaled growing uncertainty regarding coming economic developments. Market pundits appeared to become increasingly nervous, as the Federal Reserve seemed unable to continue with the then just initiated rate hike cycle. **Thus, the Fed faced a growing credibility problem in the course of 2016.**

We believe the reason for the central bank's inaction was the fact that nominal growth continues to be very modest, which was reflected by a sharp decline in yields on the long end of the yield curve. By hiking administered rates, the Fed would have flattened the yield curve further, putting pressure on credit creation and already weak economic growth.

"I think there is more of a risk of a depression than a recession."
Ray Dalio

Only rekindled hopes for a US renaissance resulting from a supposedly pro business, nationalistic reflation policy were able to generate the required change in sentiment. That had an impact on bond markets as well, which paved the way for further rate hikes. Ironically the presidential candidate who received no love whatsoever from Wall Street or the Fed ultimately made the resumption of the rate hike policy possible. **With the tailwind of this new hope reflected in the bond markets, the steepening of the yield curve gave green light for increase #2 and #3. Most recently, this differential again has been decreasing again. The yield differential between 2 and 10 year yields is now approaching 90BP.** We would recommend having an extremely close eye on this number going forward.

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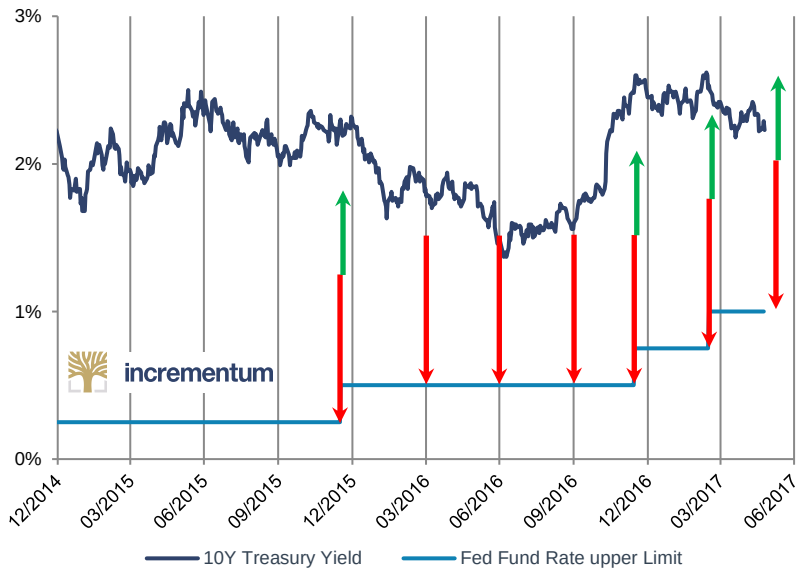
[14] Registration possible at the following link: https://www.incrementum.li/en/incrementum-newsletter/
[15] "Who's Afraid of Recession? – Incrementum Chartbook #4

Fed paused hiking when yield curve flattened



Source: Federal Reserve Bank St. Louis, Incrementum AG

In particular, enthusiastic Trump voters (otherwise known as "deplorables") contributed to the change in sentiment in the US public. The post-Lehman economic policy of the Obama administration generated no tangible benefits for many of them. Based on the rather grandiose pronouncements of "their" president, they expect no less than a return to "American Greatness". **In tandem with most market participants and the Fed they continue to expect that Trump will significantly boost economic growth and create numerous well-paying jobs**. Many confidence indicators surged to new multi-year highs in the wake of the election, but to date they remain conspicuously unconfirmed by hard economic data.

"The problem with experts is that they do not know what they do not know."
Nassim Taleb

It remains to be seen whether the change in sentiment will actually lead to stronger growth. In any case, the markets have bestowed a great deal of advance praise on the Trump administration, and are already pricing in a wide range of expected future measures to stimulate the economy and the resultant stronger growth. The gold price became a victim of these expectations – particularly shortly after the election. As already mentioned in the section in which we discuss the current situation, gold came under considerable pressure as a direct consequence of rising (real) yields. **We will discuss the potential of massive tax cuts and economic liberalization to actually boost economic output further below.**

c. Evidence for an approaching recession

"Our economic forecasting record is nearly perfect."
Janet Yellen

In the following we want to examine five indications which despite the currently prevailing optimistic sentiment suggest that a recession is far more likely than is generally believed. These signs are:

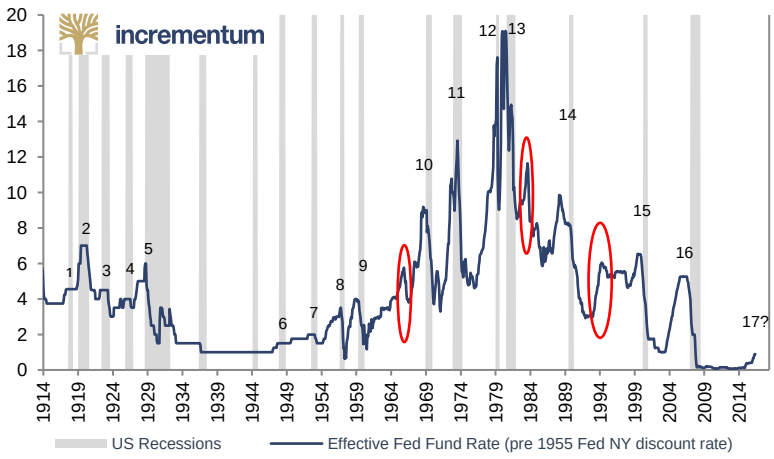
1. Rising interest rates

2. Artificial asset price inflation
3. Consumer debt and slowing credit expansion
4. The duration of the current upswing
5. Stagnating tax revenues

Indication #1: Rising interest rates

As a long-term chart of the federal funds rate reveals, the vast majority of rate hike cycles has led to a recession and every financial crisis was preceded by rate hikes as well. **The historical evidence is overwhelming – in the past 100 years, 16 out of 19 rate hike cycles were followed by recessions. Only three cases turned out to be exceptions to the rule.**[16]

Rate hike cycles and following recessions in the US



Source: Federal Reserve St. Louis, Federal Reserve New York, Incrementum AG

"It is hard to imagine a more stupid or more dangerous way of making decisions than by putting those decisions in the hands of people who pay no price for being wrong."
Thomas Sowell

This illustrates the boom-bust cycle and its relationship with monetary policy quite well. In our opinion, the most cogent and helpful explanation of this phenomenon and the associated concatenations is provided by *Austrian business cycle theory* (ABCT).[17] Even positivists and economists who are not au fait with capital theory should realize that non-monetary theories of the business cycle are standing on very shaky ground, to put it mildly (and yet, they continue to be propagated, regardless of how much countervailing empirical evidence and how many sound theoretical refutations are presented – one suspects, mainly in order to ensure that no-one thinks of questioning the efficacy and sensibleness of central economic planning by central banks).

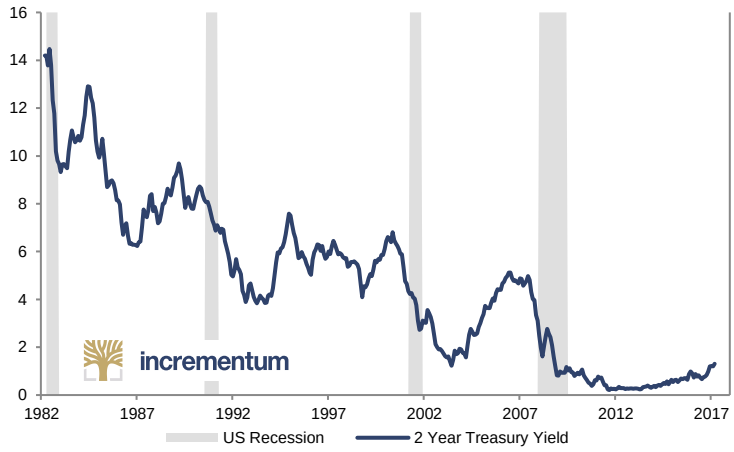
*"The tightening of policy that puts an end to the further expansion of an asset bubble and the subsequent reopening of the liquidity spigots are **always** asymmetric."*
www.acting-man.com

Future rate hikes should therefore be looked forward to with great interest as a matter of principle. One must keep in mind though that economic slumps occasionally only began with a lag of several quarters. As we already noted in the 2014 *In Gold We Trust* report[18], the turn in US monetary policy from loosening to tightening has to be dated back to the then much discussed "tapering" period. Former Fed chairman Ben Bernanke announced this

[16] These deliberations were inspired by van Hoisington - see Hoisington Quarterly Review and Outlook, Q1 2017
[17] A detailed explanation of ABCT and its implications can inter alia be found in our book Austrian School for Investors
[18] See "In Gold we Trust" Report 2014

soft exit from the QE program in mid 2013. During 2014 the Fed gradually lowered its asset purchases to zero. **Viewed from this perspective, we are already in the fourth year of the tightening cycle.** From a theoretical perspective, this is supported by the Fed's own research, which concludes that the effect of QE was akin to the effect of lowering the federal funds rate by up to 400 basis points.[19] Empirically the idea is supported by the chart of the yield on 2-year treasury notes, which began to turn up in 2014 as well.

Yield on 2 year US treasury note: At the end of the bottoming process?



Source: Bloomberg, Incrementum AG

"You can't expect the Fed to spell out what it's going to do...Why? Because it doesn't know."
Stanley Fischer

Recently it appeared as though the Fed intended to catch up with the rate hikes it neglected to implement in 2016. Considering the weak economic environment this creates the impression that the current window of opportunity is to be used in order to be able to lower interest rates again (at least by a little bit) in the next downturn.

Indication #2: Artificial asset price inflation

A declared goal of the Fed's QE programs was the inflation of asset prices, which was supposed to stimulate consumer spending down the road:

"...we made a decision back in 2008, early 2009 we were going to have a wealth affect. That was achieved, it made wealthy people wealthier but the point is, it didn't trickle down..."[20]

Richard Fisher, former president of the Federal Reserve of Dallas

"We have the worst revival of an economy since the Great Depression. And believe me: We're in a bubble right now."
Donald Trump

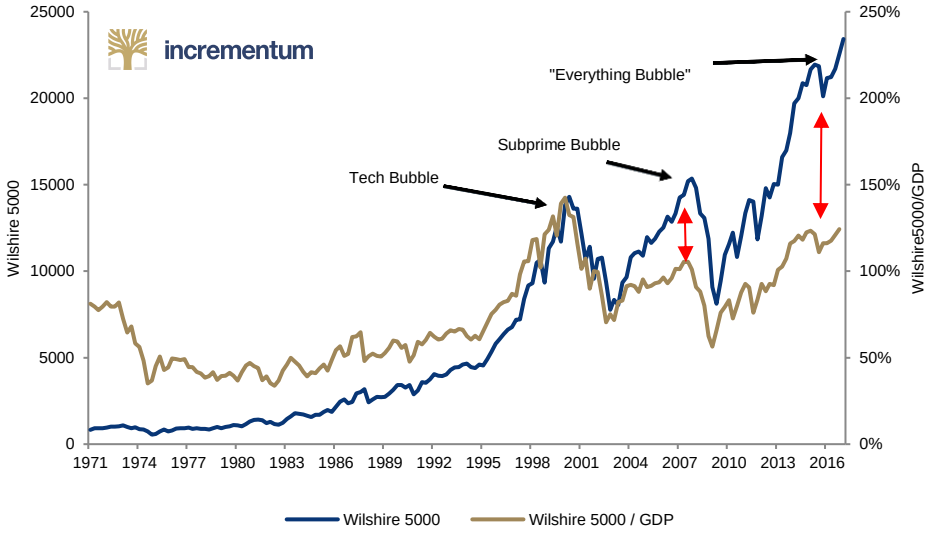
We have often pointed out that such a monetary policy represents anything *but* a sustainable approach. Every artificial inflation of asset prices will sooner or later end in a painful denouement for asset prices, unless the central bank decides to destroy the currency it issues rapidly rather than gradually, as is currently happening in Venezuela. In that case, asset price bubbles will persist, but end up generating negative real returns. As hedge fund manager Kyle Bass once put it quite colorfully, investors who invested in Zimbabwe's stock market in the mid

[19] See: http://www.frbsf.org/economic-research/files/S04_P2_SamuelReynard.pdf
[20] http://www.realclearmarkets.com/video/2016/09/08/richard_fisher_wealth_effect_did_not_trickle_down.html

2000s, achieved eye-popping nominal returns. In the end, they would have been able to buy three eggs with their fortune.

In the current cycle, the surge in asset prices has once again generated suspiciously extended valuations. Apart from the ratio of income to total household wealth shown earlier, the so-called "Buffett indicator", i.e., the ratio of total market capitalization to GDP, which is reportedly the favorite valuation indicator of legendary investor Warren Buffett, is sending a clear warning signal. For the third time in slightly less than two decades, it shows that the US stock market is significantly overvalued relative to total economic output.

Wilshire 5000 Index and Wilshire 5000/US GDP ratio



Source: Federal Reserve St.Louis, Incrementum AG, Kevin Duffy[21]

Numerous other valuation metrics also suggest that stocks are currently (significantly) overvalued, among them also the well-known Shiller P/E ratio (a.k.a. CAPE, or cyclically adjusted P/E ratio). The fact that rate hike cycles invariably have a negative effect on stock market valuations makes the current level of this ratio particularly worrisome - the recent reading of 29.1 is only slightly exceeded by the manic figure posted in 1929 and the sheer lunacy of early 2000.

"If you pay well above the historical means for assets, you will get returns well below the historical mean."
John Hussman

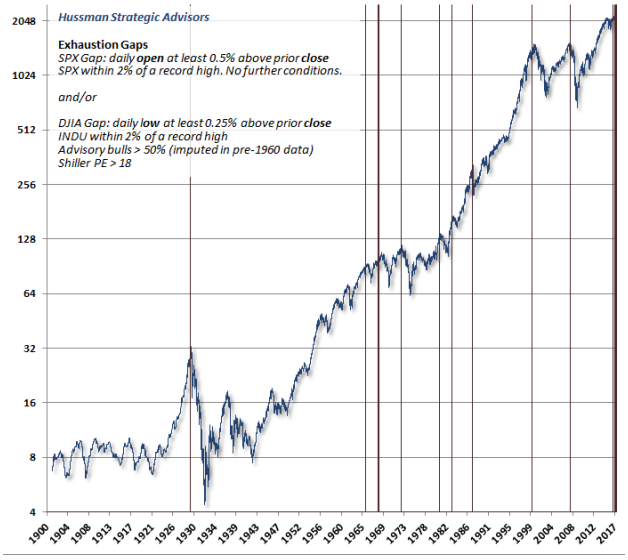
Fund manager John Hussman published an interesting contribution on the subject of overvalued stocks in his weekly market commentary on May 1 2017. He notes that near the end of a bull market, investor decisions are increasingly driven by an irrational "fear of missing out" (a.k.a. FOMO).

Hussman attempts to identify the final stages of stock market advances by means of a wide range of indicators, taking into account both fundamental data (mainly relating to valuation) and technical signals that reveal the willingness of investors to take risks (data on market internals and trend uniformity). He has argued for some time that the market appears increasingly risky. After a period during which market internals strengthened again in the rebound following the early 2016 correction low (which mitigated immediate concerns), they have begun to

[21] Vgl. "Mr. Market flunks the marshmallow test", Präsentation von Kevin Duffy, Grant's Spring Konferenz 2017

deteriorate again. Recent technical evidence suggests that a strong correction once again approaches.[22] The chart below shows a special study contained in the May 1 commentary, which looks at exhaustion gaps after strong advances, both on their own and in combination with other criteria.

The history of exhaustion gaps in the S&P 500 and the DJIA



Source: Hussman Funds

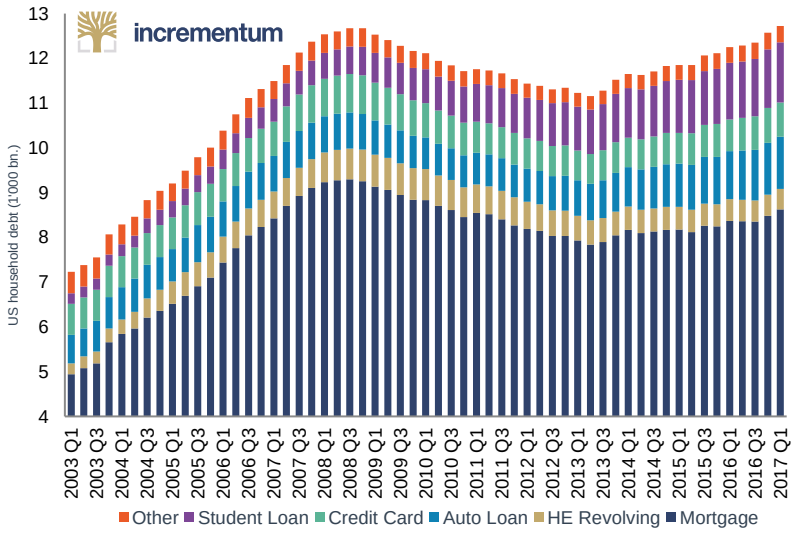
Indication #3: Consumer debt levels and a slowdown in credit expansion

Interest rate signals deliberately manipulated by the central bank create unnatural behavior patterns. For one thing, relatively wealthy individuals think that they are becoming richer due to surging stock market and real estate prices; but these higher prices are ephemeral, they represent phantom wealth created by the "money illusion", which can, and eventually will, disappear faster than it was accumulated. For another thing, artificially low interest rates undermine incentives to save and promote the taking up of additional debt. **In times of zero or near zero interest rates, society at large will tend to eschew long-term, future-oriented saving in favor of conspicuous consumption.**

In April this year cumulative US household debt exceeded its pre-crisis level again for the first time. While we regard the new record high in debt levels as a cause for concern, the press welcomed the news as a thoroughly positive development.[23]

[22] See: "Exhaustion Gaps and the Fear of Missing Out" – Hussman Funds
[23] See: "Household debt makes a comeback in the U.S"

Total US household debt outstanding (trillion USD)

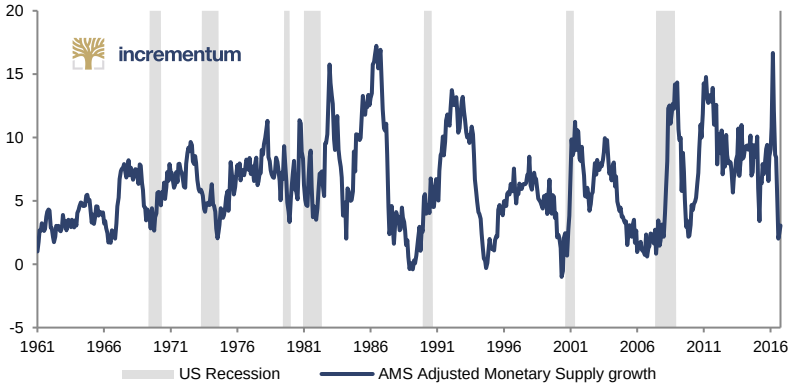


Source: Federal Reserve Bank New York, Incrementum AG

"Credit is a system whereby a person who cannot pay gets another person who cannot pay to guarantee that he can pay."
Charles Dickens

In the current monetary system, the vast majority of the outstanding money supply is created by commercial bank credit expansion. In the US the growth rate of this credit expansion has decreased quite noticeably in recent months. This is evident both in official money supply and credit growth measures, as well as in the so-called "Austrian", or adjusted money supply.[24]

US money AMS – yoy Change (%) and US Recessions

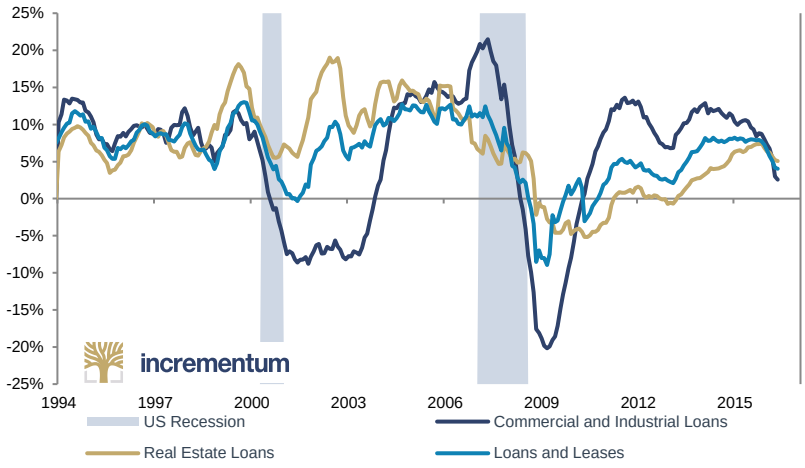


Source: AAS Economics, Dr. Frank Shostak

Historically, slowing credit and money supply growth were always reliable indicators of an impending weakening of economic activity and a rising threat of recession, as rapid bank credit expansion is essential for both the continuation of excessive consumption and the maintenance of malinvested capital in the US.

[24] The narrow Austrian or adjusted money supply (AMS) calculated by Dr. Frank Shostak of AASE (Applied Austrian School Economics) excludes credit transactions, but includes items that are clearly money, which official money supply aggregates fail to include (an item of the former type are money market fund investments – these are not money – in fact, they have to be sold for money before payment for other goods and services can be effected. The latter category comprises mainly sweeps and certain memorandum items on the Fed's balance sheet, which clearly do represent money, such as the US treasury's general account).

US Credit and Money Supply Slowing Dramatically (yoy Change)



Quelle: Federal Reserve St. Louis, Incrementum AG

Indication #4: Duration of the economic upswing

"One day everything will be well, that is our hope. Everything's fine today, that is our illusion."
Voltaire

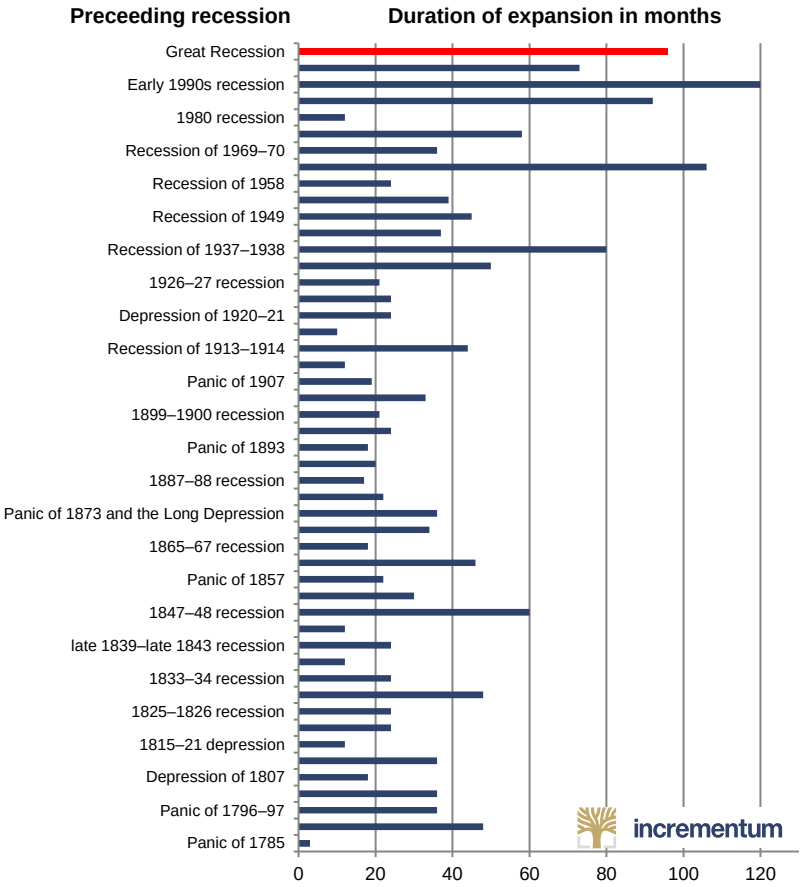
There is usually very little consensus among economists on a great many issues: *"If you put two economists in a room, you get two opinions, unless one of them is Lord Keynes, in which case you get three opinions."*[25] . Nowadays "Lord Keynes" would probably have to be replaced with Paul Krugman, who is almost as prominent and well-known for frequently supporting completely different conclusions based on the same data points, depending on whatever pet agenda of his is in need of buttressing).[26]

"There is always some chance of recession in any year, but the evidence suggests that expansions don't die of old age."
Janet Yellen

In that sense, we are slightly mystified that a US recession is categorically ruled out by the vast majority of mainstream economists at present. After all, one fact is empirically incontestable: **GDP growth is cyclical and the duration of economic expansions is limited**. At irregular intervals, expansions are invariably followed by recessions. The following table shows the duration of all historical business cycles in the US, segmented by recessions and upswings:

[25] This quote is generally attributed to Winston Churchill – it shows that there is nothing new under the sun. Today one would have to replace John Maynard Keynes with Paul Krugman.
[26] Although this comment is a bit tongue in cheek, it is actually not merely a "partisan" assertion – it is backed by plenty of evidence, much of which can be found at a site run by Tom Woods, which is actually quite fair and meticulous in its analysis of Krugman's economic fallacies, despite being explicitly dedicated to drawing attention to them: http://contrakrugman.com/

Duration of historical booms and busts in the US



Source: Incrementum AG, Wikipedia

There were 49 economic expansions since the founding of the United States, which lasted 36 months on average. Looking exclusively at the 12 post-war expansion phases, the average duration of an upswing was 61 months. As of June 2017, the current expansion has lasted 96 months, making it the third-longest in history. **Should the current economic expansion continue for another 24 months, it would become the longest in US history. In light of the evidence discussed above, we believe it is unlikely that the old record will be broken.**

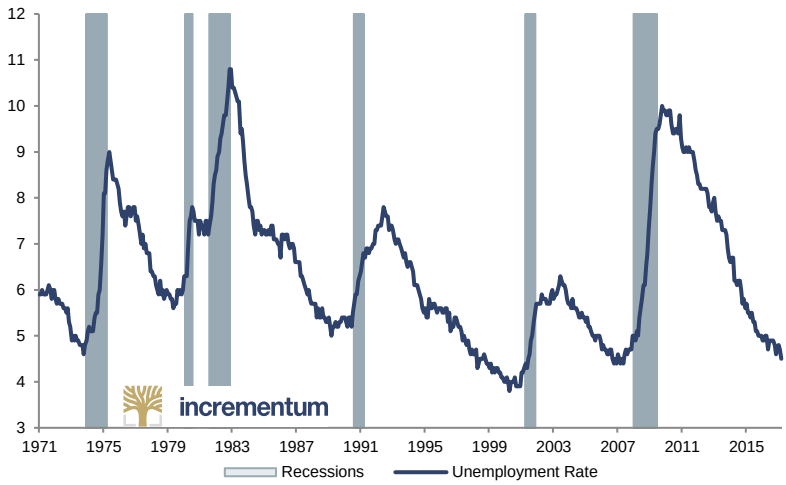
Source: Dane Williams

Declining unemployment rates are an *effect* of economic expansions. It is frequently argued that the current low unemployment rate represents evidence of the expansion's robustness, but we would point to the long-term characteristics of this statistic, which simply oscillates in a wide range.

From that perspective, the probability of an imminent recession appears much greater when the unemployment rate is low than when it is high. The widespread view that low unemployment rates are indicative of future economic growth can be attributed to the fact that many mainstream economists are in the odd habit of putting the cart before the horse. It is also widely held that the key to boosting prosperity is consumption rather than saving, investment and production – despite the fact that

the correct answer to this particular chicken-and-egg question should be glaringly obvious.

US unemployment rate – low levels beget high levels and vice versa

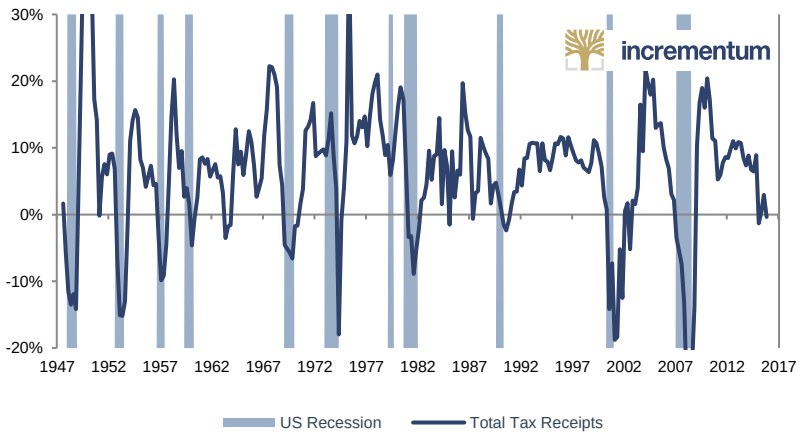


Source: Federal Reserve St. Louis, Incrementum AG

Indication #5: Federal tax revenues are stagnating

An interesting development can currently be observed in the trend of tax revenue growth rates, which typically correlate strongly with economic growth. Federal tax receipts have recently stopped growing, which is historically quite a negative sign for the economy's future performance. An outright decrease in tax receipts is as a rule only seen during economic contractions.

Federal tax receipts (yoy Change) and recessions



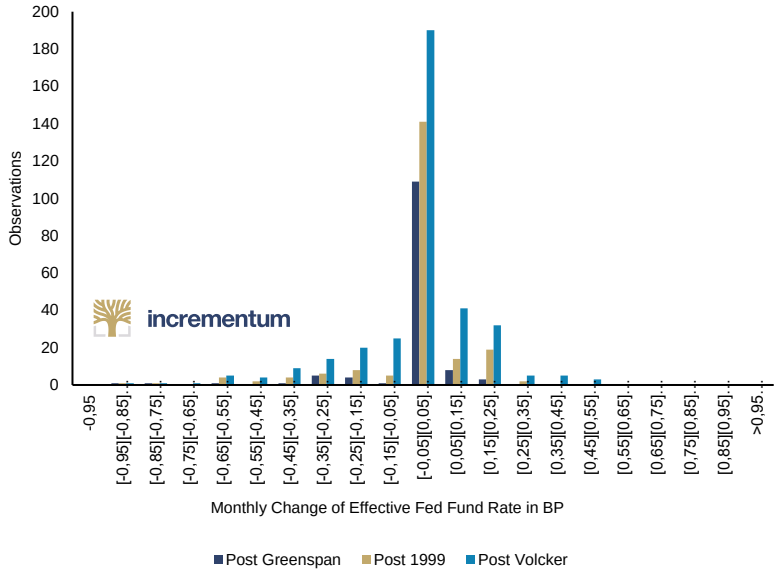
Source: Federal Reserve St. Louis, Incrementum AG

The consequences of a recession

Should the current expansion fail to become the longest in history and US GDP growth indeed turn negative within the coming 24 months, we believe the consequences could be grave. The knee-jerk reaction by the government and the Fed would definitely comprise renewed stimulus measures in

order to arrest the downturn, which implies a U-turn in monetary policy. Currently financial markets are almost exclusively focused on the planned normalization of monetary policy. Almost no-one seems to expect an impending recession or a return to loose monetary policy. Over the past 30 years, the Fed has implemented an increasingly asymmetric monetary policy. The extent of rate cuts routinely exceeded the extent of rate hikes. Statistically this is demonstrated by the left-skewed distribution of the effective federal funds rate.

Distribution of the effective federal funds rate, post-Volcker era, post-Greenspan era and post-1999



Source: Federal Reserve Bank St. Luis, Incrementum AG

It would be a big surprise, so to speak a black swan, if the response of the authorities to the next economic downturn were to deviate from the usual one.

"In a theater, it happened that a fire started offstage. The clown came out to tell the audience. They thought it was a joke and applauded. He told them again, and they became still more hilarious. This is the way, I suppose, that the world will be destroyed – amid the universal hilarity of wits and wags who think it is all a joke."
Søren Kierkegaard

Since the normalization of monetary policy hasn't progressed sufficiently yet, renewed stimulus measures would probably shake market confidence in the efficacy and sustainability of the monetary therapies applied to date. Historical experience indicates that the crumbling of such a deeply ingrained faith is often a wonder to behold; the best thing that can be said about it is that it will sell newspapers and raise the ratings of TV news programs. **Moreover, the dosage of said monetary therapies are subject to the law of declining marginal utility, in other words, the next round of QE would probably have to be significantly larger than QE3 was. If the markets were to sense that such a development was likely, the gold price would probably rally quite dramatically.**

To this it should be noted that gold at times reacts to future changes in economic and monetary policy with a considerable lead time. There are of course no hard and fast rules with regard to this and the statistical sample size is small – but it is fair to speculate a bit based on past experience and logical reasoning. Both suggest that the extent of the lead time will largely depend on how vividly market

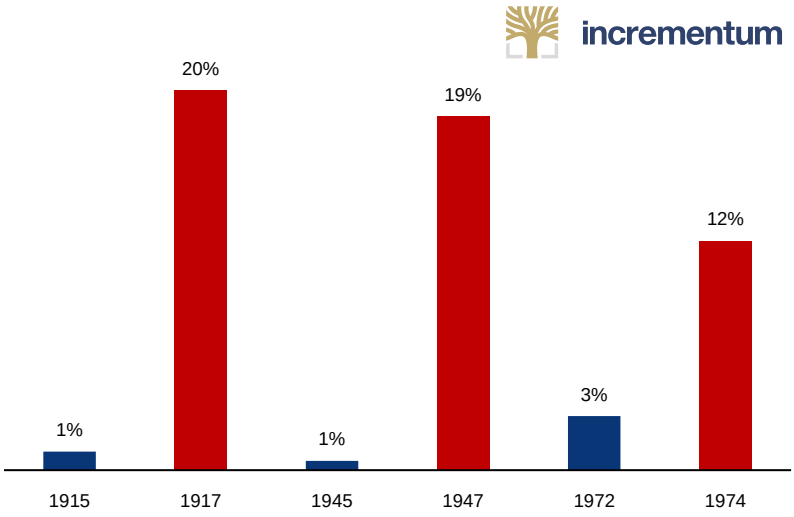
participants remember the last major financial calamity. The fresher the memory, the more sensitive the market is likely to be. That explains why the gold price rallied strongly from June 2005 to mid May 2006, despite the fact that most of the important fundamental gold price drivers were bearishly aligned at the time.

d. Stagflation: A Gray Swan

As discussed above, we currently believe that the probability of a US recession is significantly higher than is generally assumed. But how would a recession affect price inflation dynamics?

Over the past several years we have witnessed one of the greatest monetary experiments in human history. The eventual outcome remains uncertain at the current juncture. However, a humble look at monetary history does tells us the following with respect to inflation: Neither mainstream economics nor central bankers can control the specific progression of price inflation momentum. The pathetic and consistently failing attempts to regulate the pace of consumer price inflation as one would regulate a thermostat merely betray hubris and a lack of knowledge and understanding of monetary history (not to mention a reliance on theories that are highly questionable). **Sharp increases in price inflation as a rule occur unexpectedly and in relatively compressed time frames**. As the following chart illustrates, that has already happened many times.

Historical US-inflation surprises



Source: Incrementum AG, Federal Reserve St. Louis

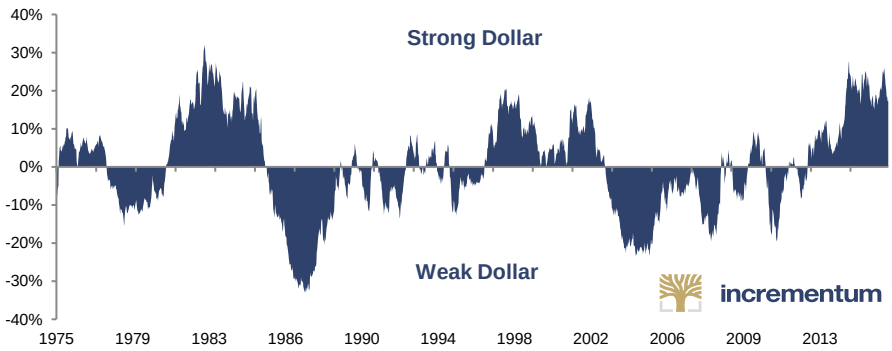
"There seems to be an unstated assumption that a central bank that has so far not even been able to push consumer price inflation rates up by doing everything to debase its currency, will somehow be able to keep price inflation in check if or when it finally does rear its head. It seems more likely to us that a chimpanzee will one day find the answers to all unresolved questions of theoretical physics."
www.acting-man.com

Contrary to the popular opinion that developed nations are characterized by very low inflation, enormous *monetary* inflation has already occurred. As an example: in terms of the broad true money supply TMS-2, the amount of money in the US economy is now 4.34 times the level of January 2000. Since January of 2008, the broad true money supply has increased by 141%, while consumer prices have risen by a cumulative 15%. In short, since early 2008 the money supply has grown 9.4 times faster than CPI. The effects of this monetary inflation are so far only visible in distortions of relative prices.

Thus, asset prices have increased to a rather conspicuous extent. It seems more than passing strange that rising food prices are as a rule regarded as great calamity, while rising home prices are considered a blessing. **Both simply reflect a decrease in purchasing power; whether it finds expression in home prices or food prices is not relevant to the fact that purchasing power has been lost** (even though it does of course matter with respect to business cycle theory that a large shift in relative prices has occurred. The non-neutrality of money is reflected in these distortions, which obviously greatly affect investment decisions and the allocation of scarce resources).**27**

A decisive factor likely to determine future price inflation dynamics will be the response of the US dollar to an economic contraction. In past recessions, the dollar tended to initially appreciate against most important foreign currencies. Then the Fed adopted an easy monetary policy and the dollar's external value decreased again. The extent and persistence of these moves depended also on the dollar's relative value at the outset of economic downturns, as well as on other contingent circumstances (such as dollar shortages in the euro-dollar market and similar market structural or psychological aspects). In that sense, the current situation differs markedly from that prevailing at the beginning of the last downturn, as the dollar has already appreciated considerably in recent years. Persistent further strength in the dollar would be the exception rather than the rule under these circumstances.

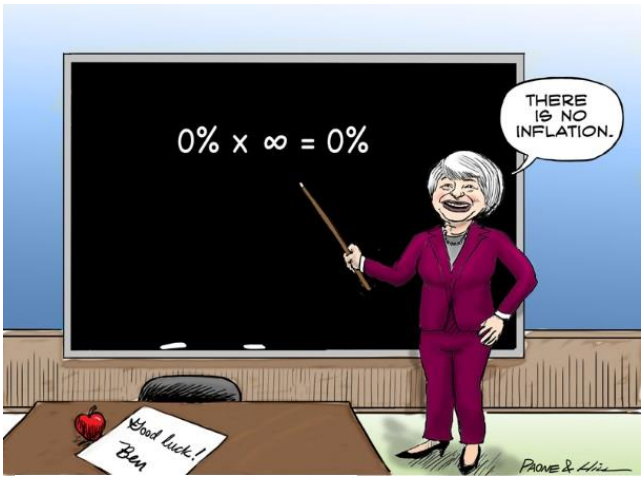
US dollar index: Recently strength has dominated



USD Index (30 month change.)
Source: FRED, Incrementum AG

27 See: "Why Keynesian Economists Don't Understand Inflation", Frank Hollenbeck, Mises.org

Should a US recession strike concurrently with a devaluation in the US dollar, investors would be faced with a very difficult situation. **While in 2008, it was primarily concerns about liquidity and the fear that "not enough money would be printed" were dominant (a situation known as a "deflation scare"), the markets may arrive at a different assessment in the next downturn**. That would be particularly likely if confidence in the Fed's ability to revive the economy with another round of stimulus measures were to falter before they are even implemented. As soon as market participants consider rising price inflation to be a serious possibility, a fundamental shift in general market sentiment is likely to occur. The currently still prevailing expectation that "*if there are problems, central banks will implement further inflationary measures*" would be increasingly questioned if inflation expectations were to rise.



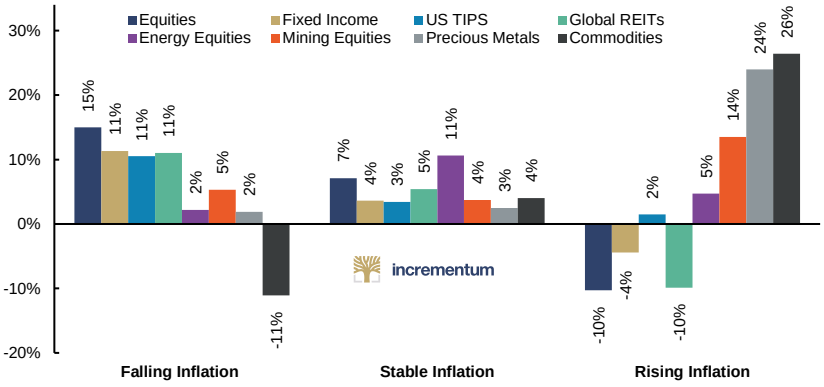
Source: Merk Investments LLC

Based on this we want to discuss the performance of different asset classes in a variety of price inflation environments. Apart from precious metals, inflation-protected bonds are often cited as suitable hedges against inflation. Many investors are unaware of the fact that the inflation-protection feature essentially only comes into play at maturity. Before they mature, these bonds exhibit considerable sensitivity to changes in nominal interest rates. That is not exactly an unimportant factor in portfolio construction. In particular, long term inflation-protected bonds often face headwinds once price inflation enters an uptrend, which is usually accompanied by rising nominal interest rates. If this asset class is added to a portfolio as an inflation hedge, substantial (accounting) losses may be unexpectedly recorded in some years.

As the following chart illustrates quite clearly, both stocks and bonds tend to lose ground in an environment of accelerating price inflation. Even though stocks are often considered to be suitable inflation hedges since they represent claims to real assets, historical data on this point are rather more ambiguous. Numerous studies actually show that stock prices and price inflation are negatively correlated.[28] In other words, a surge in price inflation will normally have a negative effect on stock prices.[29] Of course the effect varies greatly between market sectors. **That is a major reason why gold stocks and the stocks of other commodity producers have attractive characteristics in the context of prudent portfolio diversification, as they are clearly positively correlated with rising inflation rates.**

[28] See "Asset returns and inflation", Eugene Fama und William Schwert
[29] See "The 'Fisher Effect' for Risky Assets: An Empirical Investigation", Journal of Finance, Jaffe and Mandelker

Performance of different asset classes in a variety of price inflation regimes



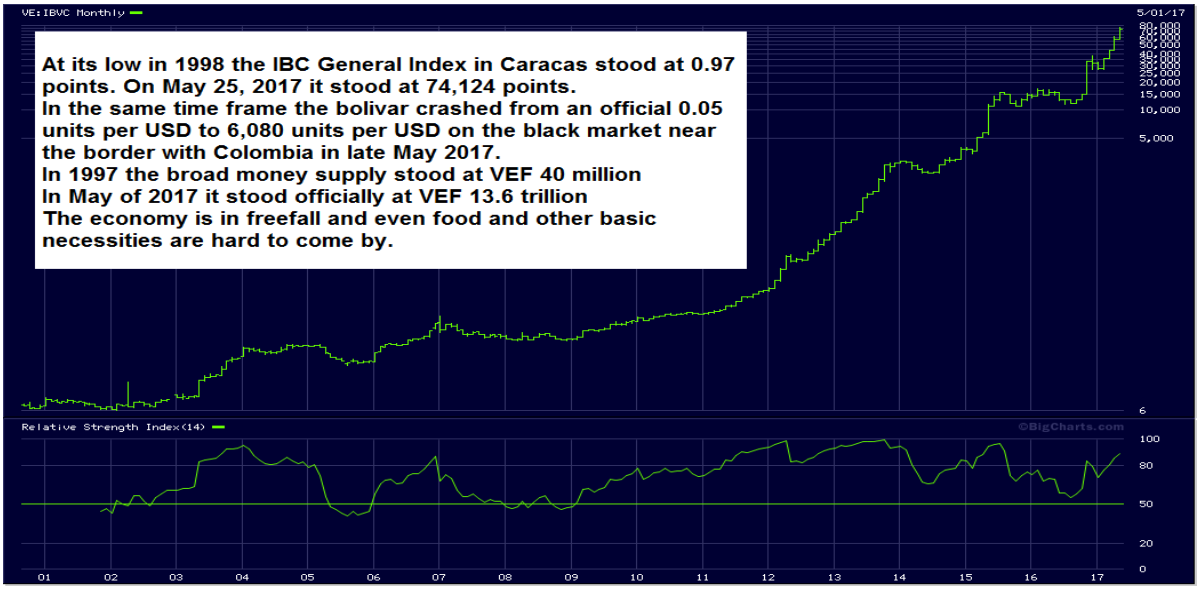
Source: Wellington Asset Management, Incrementum AG

"No subject is so much discussed today – or so little understood – as inflation."
Henry Hazlitt

In an environment of merely "elevated" 1970s style price inflation rates, the value of future earnings streams tends to be heavily discounted by the stock market. Many sectors will experience a sharp compression of multiples. Broad stock market indexes in developed markets are liable to decline, as most growth stocks will come under strong pressure. Lower order industries close to the consumer will suffer as well, and so will domestically focused banks, especially if real interest rates are persistently negative. Stocks of capital-intensive companies in higher order goods industries such as miners or various "smokestack" industries will tend to hold up better or even thrive.

These trends become even more pronounced if a country's currency breaks down in a crack-up boom, and a hyperinflation episode begins. As an aside, it is possible to survive and even thrive in hyperinflation conditions, but it is not easy and one has to be constantly on one's toes. Wealth preservation becomes a full-time job, and many traps await the unwary. Moreover, governments will often do their utmost to prevent people from trying to preserve their wealth, as the associated activities are usually blamed for exacerbating the situation (governments presiding over hyperinflation never blame themselves or their policies).

IBC General, Caracas, Venezuela - an example of a stock market in an emerging economy under hyperinflation conditions



Source: www.acting-man.com

These magnified boom-bust cycles on steroids are also very dangerous because the trend is bound to eventually rapidly reverse after which a "stabilization crisis" will commence (as a rule this happens overnight, once the official medium of exchange is completely repudiated). What was valuable and sought after can become an instant liability, while assets and business sectors that were previously shunned will begin to recover and thrive again. **The average citizen is probably best served by holding precious metals and foreign investments if it becomes necessary to deal with such circumstances.**

e. Further Potential Gray Swans

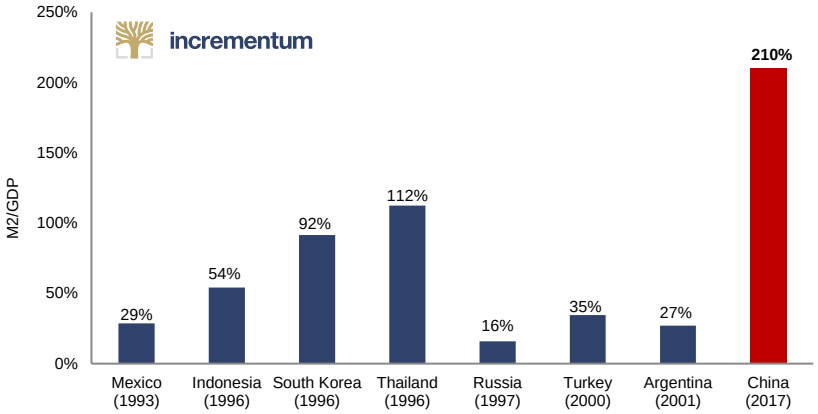
Below we briefly list a number of additional gray swans, which we believe have strong potential to become relevant at some point.

A credit crisis in China

"The idea that China is now the driving economic power in the world, I think, is illusory or somewhat of a fallacy."
Kyle Bass

There has been recurring speculation about a potential credit crisis in China for a number of years. Until 2014 China had a positive balance of payments and accumulated foreign exchange reserves. Since then the trend has reversed and the renminbi has begun to steadily decline against the US dollar. Credit expansion in China attained particularly egregious proportions after the 2008 crisis.

China – economy-wide leverage compared to other crises



Source: Bloomberg, Incrementum AG

Should China's banking system indeed experience a credit crisis, one would have to expect a strong devaluation of the yuan against the US dollar, combined with surging gold prices.

A political crisis in the US in the context of an impeachment of president Trump

The excitement at Donald Trump's election victory was not restricted to financial markets. A majority of the established power elite in Washington (and elsewhere) was also caught on the wrong foot by his election. The desperate efforts to somehow push him out of office by means of an impeachment procedure have intensified. His unconventional approach to politics may at some point provide his detractors with an opportunity to initiate such a step. At the time this report was being written, the probability of such a development appeared to be increasing.

An escalation of geopolitical tensions in the Middle or Far East

"In times of crisis people are generally blind to everything outside their immediate necessities."
Albert Einstein

The probabilities of some sort of military confrontation in the Far East have increased as well. The situation on the Korean peninsula, but also between China and Japan, China and the Philippines as well as China and Vietnam, in short the entire South China Sea, has become significantly more tense. Numerous simmering and actual conflicts in the Middle East also harbor a great deal of instant escalation potential.

The effect of such potential scenarios on the US dollar and gold will largely depend on how a given conflict will play out. It is to be suspected that the crisis metal, gold, will at least initially move higher. **We nevertheless believe that the direct effect of (geo)political events on the gold price generally tends to be over-estimated.** Readers interested in more details on this topic should take a look at the transcript of our last advisory board meeting.[30]

[30] Advisory Board Meeting – April 2017

Hyper-deflation as a result of a global banking or government debt crisis

We have already discussed the non-sustainable nature of the current global debt situation extensively in past *"In Gold We Trust"* reports. Should the current state of chronic over-indebtedness result in a global banking or debt crisis, it would *ceteris paribus* have a strongly deflationary effect requiring massive countermeasures to be launched by central banks. A large proportion of deposit money would no longer be accessible and cash reserves would begin to reflect a large premium. If a hyper-deflation scenario were to actually eventuate, gold prices would be set to decline in nominal terms, but gold's real purchasing power would either be maintained or possibly even increase.[31] **For this scenario in particular it is recommended to invest in physical metal and store it outside of the banking system**.

Reorganization of the global monetary order including a (partial) remonetization of gold

Both national and international monetary orders are regularly subject to change. The last paradigm change happened on 15. August 1971, when US president Richard Nixon suspended the Bretton Woods system that had been in force until then. Sooner or later the current post-Bretton Woods standard, i.e., the US dollar standard will be adapted as well. In our opinion the probability that gold could play a role in this new monetary order has lately increased. Even some members of president Trump's team of advisors are well aware of the issue and speak about it publicly. In this context the exclusive interview with Dr. Judy Shelton in this "*In Gold We Trust*" Report is undoubtedly of great interest.

All these gray swans represent scenarios that cannot be ruled out from our perspective. We will examine several of them in greater detail in other sections of this report.

[31] See Austrian School for Investors, p. 147 ff

f. Conclusion

"Remember that you are a Black Swan."
Nassim Taleb

In this ornithologically tinged section we have considered a number of "swans" in different hues which could have a significant effect on the gold price. **In our opinion a potential recession in the US, which would invariably lead to a U-turn in monetary policy, represents the potentially most important catalyst for the future trend in the gold price.**

Gray Swans and their possible effect on the gold price

Gray Swan	Influence on USD	Expected Influence on Gold (in USD)	Expected Influence on inflation
Stagflation	Depreciation	positive	inflationary
Credit crisis in China	Appreciation	positive	uncertain
Political crisis in the US	Depreciation	positive	uncertain
Geopolitical escalation	Uncertain	positive	inflationary
Hyper deflation	Appreciation	negative	deflationary
Inflationary boom	Depreciation	strongly positive	inflationary
Monetary reset	Depreciation	strongly positive	inflationary

Source: Incrementum AG

"The record of fiat currencies through history, 100%, is eventual failure. The record of gold for 5,000 years, 100%, is lack of failure."
Simon Mikhailovich

We are well aware that as Austrian School representatives, we may be inclined to be a tad too hasty in suspecting an economic downturn to approach in fairly short order. Nevertheless, we believe that generally, the potential for such a scenario to eventuate is unduly underestimated at present. **One almost gets the impression that the possibility of a recession is completely disregarded and treated as though it were a black swan**. We believe there are already numerous indications which suggest that the current expansion is going to end in the foreseeable future. A recession scenario is therefore actually quite probable in our view.

If our expectation is confirmed, a monetary policy response in the form of rapid rate cuts and a renewed round of quantitative easing should be expected. In such a scenario gold should post significant price gains.

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Populism and its True Cause

Key Takeaways

- The vote for Brexit and the election of Donald Trump has baffled the main stream and the establishment.
- The generally surprising results were consequences of the economical erosion of the past years.
- As deficit spending and protectionism becomes even more popular, the consequences of these policies will influence inflation dynamics and financial markets.

"Populism is a rebellion of the common man against the elites and to some extent, against the system."

"Populism: The Phenomenon", Bridgewater

a. The new populism

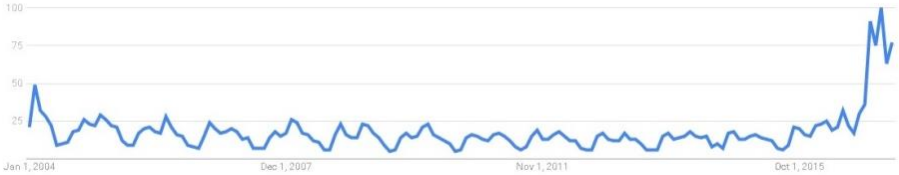
First the Brexit, and thereafter the election of Donald Trump as the 45th president of the United States - 2016 was a blow to the ruling globalist establishment. The two events have two important characteristics in common:

1. Most market participants and observers didn't believe *ex ante* that they were possible, and as a result were completely surprised when the unexpected happened.

2. One shared feature was that the debates preceding these events were for the most part not focused on fact-based argumentation, but generally shaped by hurtful *ad hominem* attacks.

In this context the terms populism and particularly the 2016 word of the year "*post-factual*" became a mainstay of political commentary all over the world. Although the term populism is often used as a political battle cry and no universally valid definition of it exists, its sociopolitical relevance in modern-day public discourse can hardly be disputed. Google Trends illustrates that there was a veritable explosion in search queries for the term "populism" last year.

Google search queries for "populism"



Source: Google Trends

"I will be the greatest job President that God ever created."
Donald Trump

In our *2016 In Gold We Trust* report and our December 2016 investor letter we already discussed budding populism and the associated phenomenon of Donald Trump in depth.[32] In both publications we stressed that from our perspective, populism – regardless of its political flavor – merely represents *a symptom*.

"If you are not confused about the economy, you don't understand it very well."
Charlie Munger

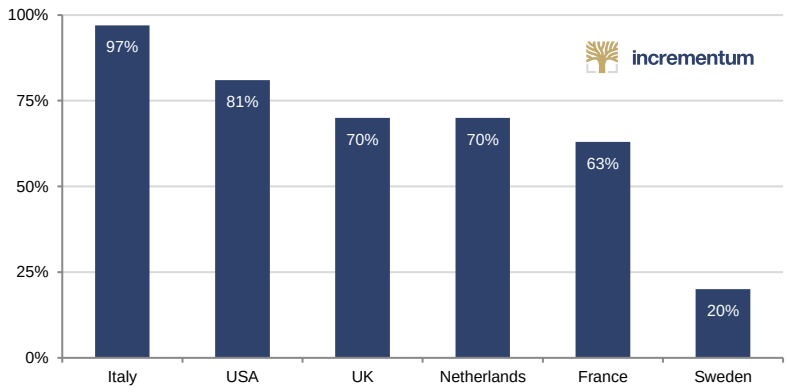
Although there are idiosyncrasies in every country that foster the rise of populist movements, we believe that the ailing foundation of the economy provides the fertile soil and is the major driver of people's dissatisfaction and the associated voting decisions. To assert that populism is the reason for this process of political change is in our opinion far too simplistic. In our letter to investors we stated the following:

"In our opinion, the "astonishing" election outcomes in the Western world are by no means solely the work of populist demagogues; rather, their cause is attributable to a society that is clearly drifting apart economically, and the associated loss of trust in established institutions."[33]

—
[32] See in this context In Gold We Trust 2016, p- 30-32: and our Letter to Investors of December 2016
[33] See Letter to Investors and Outlook 2017, p.2

Our analysis is supported by a McKinsey study, which examines the trend in real household incomes in 25 industrialized nations.[34] McKinsey arrived at the striking conclusion that real incomes of 65 to 70 percent of households in developed countries either stagnated or even declined between 2005 and 2014. The following chart illustrates the trend in household incomes in selected countries.

Share of households with stagnating or declining income between 2005 and 2014



Source: McKinsey, Incrementum AG

The momentousness of this study becomes obvious when considering that the object under review are 25 industrialized countries with a population of more than 800 million people, generating 50 percent of global GDP.

"Demographics is destiny."
Arthur Kemp

Moreover, numerous studies show that the opportunities and expectations of coming generations to earn more than their parents have worsened significantly. While the probability that members of the baby boomer generation would earn more than their parents was 62%, this probability has declined to 50% for generations born since 1980.[35] Income equality has deteriorated dramatically over time as well. The share of national income earned by the bottom 90% of the US population has decreased from 66% in 1980 to 50% today.[36] Contrary to the picture painted by numerous macroeconomic statistics, the economic situation is apparently not as bright as it is often portrayed.[37]

What cannot be quantified by statistical aggregates is the cause of the economic erosion suffered by the middle class, which can ultimately be traced back to our monetary system. The low interest rate environment orchestrated by central banks has not only failed to solve our economic problems, but is – in keeping with the business cycle theory developed by Mises and Hayek – the very *cause* of the business cycle.

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34 See "Poorer Than Their Parents? Flat or Falling Incomes in Advanced Economies.", McKinsey
35 See "The American Dream, Quantified at Last", New York Times
36 See "Populism is the result of global economic failure", The Guardian
37 These macroeconomic data often must be taken with a large pinch of salt and critically questioned as well. In our 2016 In Gold We Trust report we have for example presented gross output statistics, which as an alternative to gross domestic product take all stages of the production structure into account, and thereby provide a more comprehensive picture of the state of an economy.

To quickly summarize Austrian business cycle theory[38]: it states that the artificial decrease in interest rates induced by central bank policy sends false signals to market participants. The incentive to accumulate savings declines, while the incentive to take on debt increases. This sets an artificial boom into motion that affects both production and consumption, which sooner or later must be corrected by a recession.

"Debts can never erase debts. Debts erase wealth, or wealth erases debts."
Keith Weiner

Apart from creating the business cycle, ZIRP and NIRP-policies of central banks also result in an ever more pronounced concentration of incomes and wealth. In this context, it is crucial to understand the so-called ***Cantillon effect***, which we have also discussed comprehensively in our book.[39] As we point out there, when newly created money is introduced, it enters the economy at discrete points, it cannot be distributed evenly across the entire economy. **Instead, every expansion of the money supply results in a transfer of wealth: the early receivers of new money can purchase goods at their existing prices and thus gain purchasing power, whereas later receivers of new money can only buy goods at prices that have already increased, and are losing purchasing power as a result.** In today's monetary system, it is primarily commercial banks, the government and large corporations with good financial market access that are benefiting as the earliest receivers of newly created money, while all other sectors are losing out – the further removed from the source of money creation they are, the bigger their losses.

"Cheap money becomes very expensive in the long run."
Daniel Lacalle

This concentration effect is *inter alia* reflected by real estate prices in international financial centers such as London or New York, as well as in large discrepancies between urban and rural areas. Maps showing the distribution of votes in the US election and the Brexit referendum can clearly be interpreted from this perspective as well.[40]

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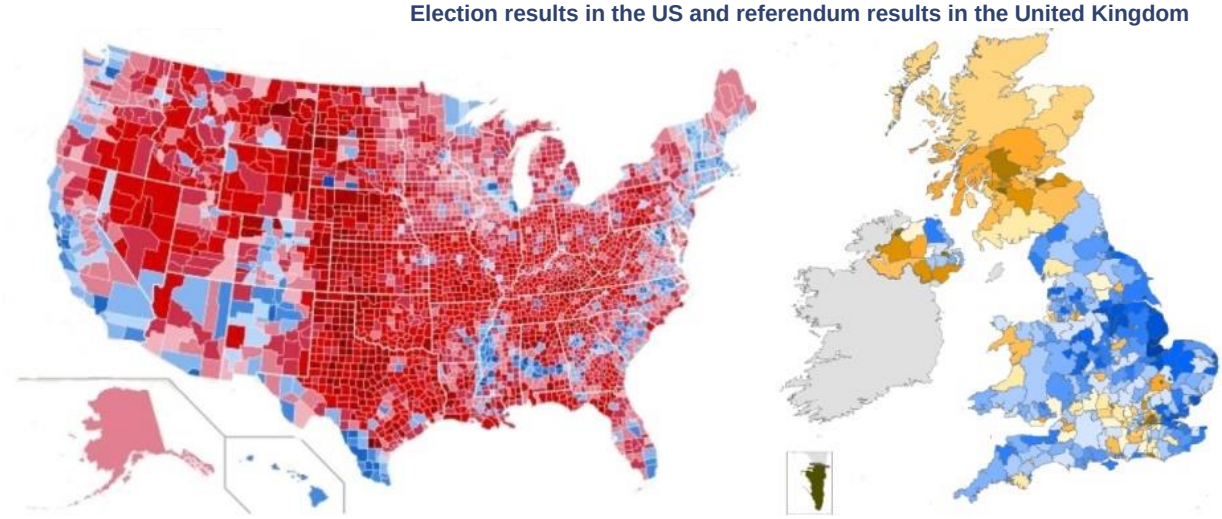
[38] A detailed explanation can be found in section 6 Business Cycles of our book Austrian School for Investors: Austrian Investing between Inflation and Deflation
[39] See Austrian School for Investors: Austrian Investing between Inflation and Deflation p. 135 ff.
[40] The two maps show the election results in US counties and the results of the referendum vote in British electoral constituencies. In the US red indicates that a majority voted for Donald Trump, blue indicates a majority voted for Hillary Clinton. In the United Kingdom, blue = in favor of Brexit, yellow = against Brexit. The more intense the color, the greater the respective majority.

Election results in the US and referendum results in the United Kingdom



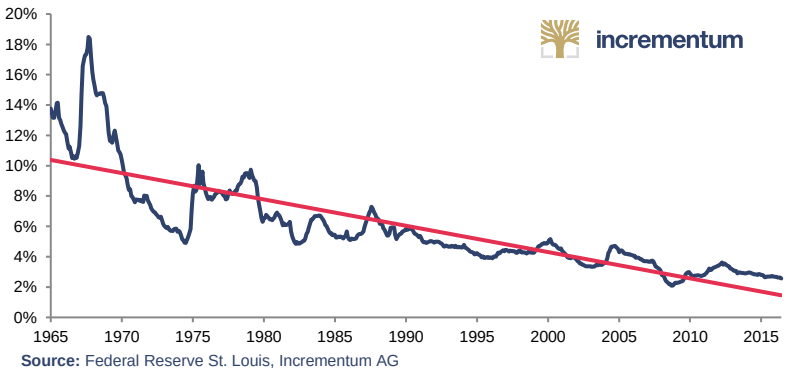
Source: Wikimedia Commons, Incrementum AG

"You just know it's going to be painful, and something bad is going to have to happen first. It's not proactive. That's the one thing you know about politicians. They're not proactive. They're reactive. So something bad happens, and then they do something. It's virtually never the other way around. Nobody ever got paid or elected for solving a crisis in advance."
Russell Napier

It is conspicuous that the Trump election and Brexit met with high approval rates in largely rural areas in the US and Great Britain, while metropolitan areas tended to vote in favor of the status quo (i.e., for Hillary Clinton or Remain).

The economic situation in these regions undoubtedly plays a role in this. While large cities have often benefited from the fiat money system due to their proximity to politics and financial markets, many rural areas are drying up economically. These regions were often hit the hardest by deindustrialization.

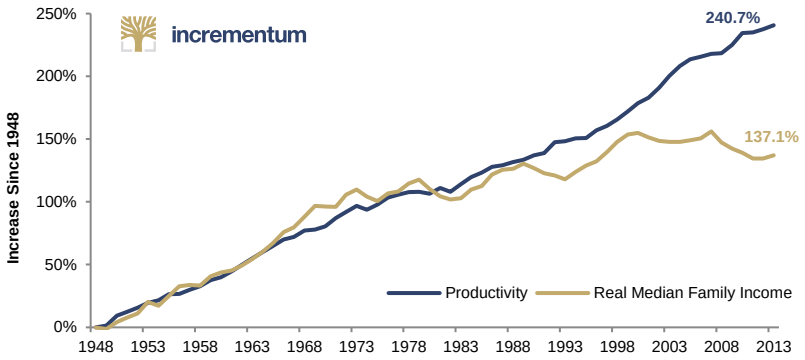
US Industrial Production, 30 year Annualized Percentage Change



Source: Federal Reserve St. Louis, Incrementum AG

The following chart shows the discrepancy between productivity growth and real household incomes. After World War II income and productivity growth tended to track each other closely, but since the 1980s a growing divergence can be observed.

Growing discrepancy between productivity and real median family income



Source: EPI, Bureau of Labor Statistics, Incrementum AG

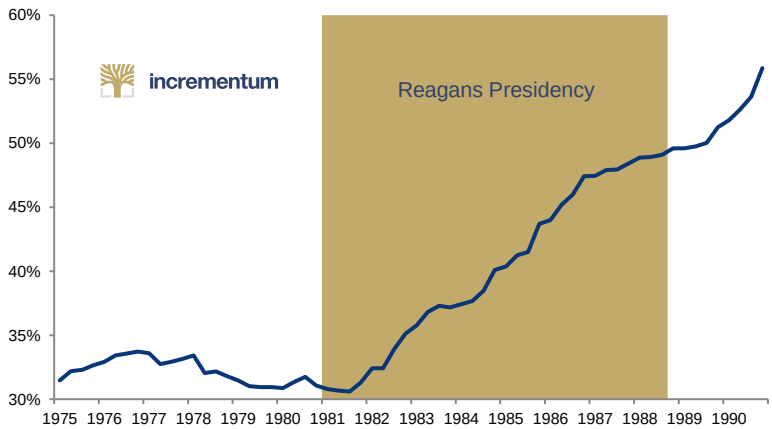
The same applies to hourly wages as well: between 1973 and 2015 net productivity grew by 73.4%, while the hourly wage of the average US worker rose by a mere 11.1% in inflation-adjusted terms, and thus effectively stagnated. Viewed from this perspective, it is not surprising that voters are increasingly warming up to populist ideas.

b. Is Donald Trump the New Ronald Reagan?

"The problem with fiat money is that it rewards the minority that can handle money, but fools the generation that has worked and saved money."
Adam Smith

Shortly after Donald Trump's election, comparisons with the presidency of Ronald Reagan emerged, with Trump frequently being hailed as a reincarnation of Reagan. Admittedly several similarities between the two can indeed be discerned. Neither Reagan nor Trump were career politicians, but rather entered politics as newcomers, who benefited from the anemic state of the economy under their predecessors. In terms of economic policy, both are generally considered to be market-friendly. **However, in hindsight Ronald Reagan's fiscal legacy was far less conservative than his reputation would have suggested.** That can be easily seen in the trend of US public debt as a percentage of GDP.

US Federal Debt as a Percentage of GDP



Source: FRED, Incrementum AG

During Reagan's presidency, the US public debt-to-GDP ratio soared from 31% in 1981 to 50% in 1988. Should Trump succeed in implementing his plans, it appears highly likely that he will go down in history as a notorious spendthrift as well.

"The virus of radical monetary intervention has entered the world's political bloodstream."
Jim Grant

Despite numerous similarities, there are very significant differences as well, which we believe invalidate the comparison. The main issue in this context consists of the fundamentally different economic conditions prevailing at the time of Reagan's inauguration compared to those faced by Trump. A comparison of important economic data points makes this glaringly obvious.[41]

Reagan vs. Trump: The starting position could not be any more different!

	Beginning of era	End of era
Inflation (CPI):	14.8%	1.1%
Interest rate 10Y Treasury bonds:	10.7%	7%
S&P 500 P/E:	7.1x	22.4%
Government debt:	USD 800bn	USD 2,680bn
Government debt/GDP:	30.8%	49.8%

	Beginning of era	During era
Inflation (CPI):	1.6%	?
Interest rate 10Y Treasury bonds:	2.1%	?
S&P 500 P/E:	20.4x	?
Government debt:	USD 19,800bn	?
Government debt/GDP:	105%	?

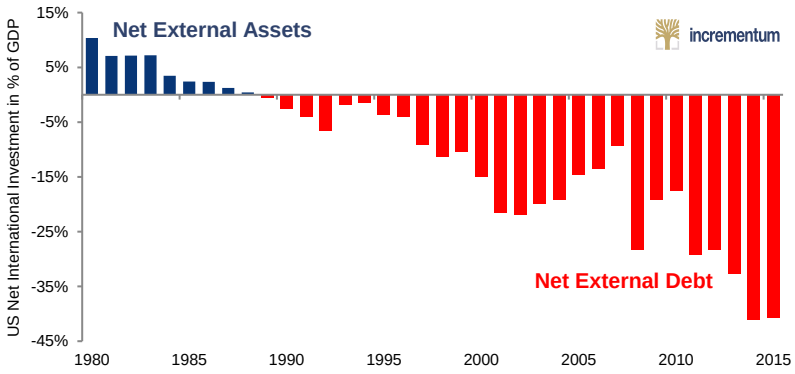
Source: Wikimedia Commons, FRED, Incrementum AG, author's calculations

The starting conditions for the two presidents couldn't be more different. While Reagan came to power at a time of extraordinarily high interest rates and rising consumer prices, as well as a positive US net international investment position of 7.1% of GDP, Trump is faced with a completely different situation. Public debt is already at an exorbitant level, amid artificially low interest rates due to the Fed's past monetary policy operations. Trump won't be able to afford a new era of deficit spending, as he could well end up driving interest rates on treasury debt to levels that trigger an unstoppable debt spiral as debt service costs explode - which are incidentally already at a record level in absolute terms despite extremely low interest rates ($508 bn. p.a. as of Q1 2017).

Moreover, the US net international investment position has changed rather dramatically in recent decades, as the following chart illustrates.

[41] See: Annual Letter to Investors/Outlook 2017: https://www.incrementum.li/journal/annual-letter-to-investors-outlook-2017/

US net international investment position



Source: FRED, Incrementum AG

c. The "Return" of Fiscal Stimulus?

As more and more market participants and experts recognize the dangers and the unintended consequences of loose monetary policy, the notion of a flight forward toward an expansionary fiscal policy seems to be gaining in popularity. President Trump wants to prevent the collapse of the ailing US infrastructure by funding a giant infrastructure investment program and stimulate consumer spending concurrently by means of significant tax cuts. Specifically, he plans to lower federal income taxes and abolish inheritance and gift taxes, while military and infrastructure spending are to be expanded.[42] At the same time reservations against austerity policies enacted to combat the sovereign debt crisis continue to be voiced repeatedly in the EU. Instead of fiscal rigor and austerity policies, a "policy of growth" shall be implemented.

"All governments suffer a recurring problem: Power attracts pathological personalities."
Frank Herbert

While it remains to be seen whether and to what extent such plans will (or can) be implemented, a change of heart is nevertheless discernible in comparison to the past several years. **While recent years were primarily characterized by the monetary experiments of central banks, these days the same old story about expansionary fiscal policy is increasingly often heard again. From our point of view the innocently sounding term is only an euphemism for debt-financed stimulus.**

[42] See: Die Voodoo-Ökonomie des Donald Trump („The Voodoo economics of Donald Trump"),Berthold N.

"We cannot afford to spend on infrastructure in the way that we should...But few of such benefits would be reflected in private cash flow to repay debt. Much such infrastructure would have to be funded with government debt... We would never have reached this position of extreme indebtedness were we on the gold standard, because the gold standard is a way of ensuring that fiscal policy never gets out of line."
Alan Greenspan

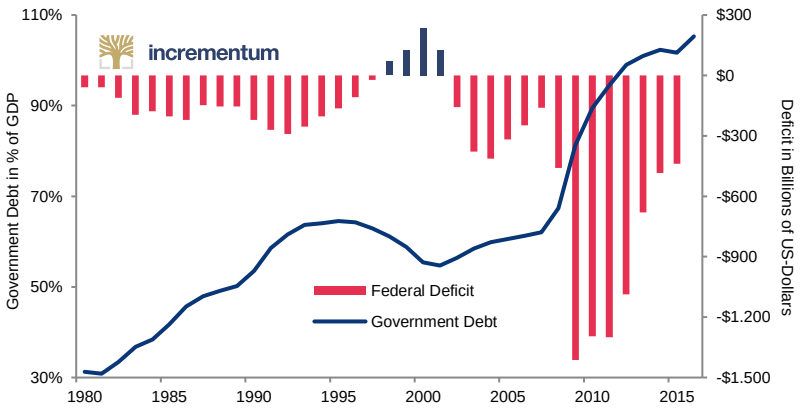
Is it likely though that a fresh round of deficit spending will replace loose monetary policy? We don't think so. Upon closer inspection, the idea of pursuing an expansionary fiscal policy isn't as simple as it sounds. Hayek refers to the knowledge problem that bedevils central planners. While resource allocation in the free market is guided by the price system and tends to result in the production of the goods and services most urgently demanded by consumers, the decisions of government bureaucrats lack a comparable mechanism. Due to their limited knowledge and an uncertain future, they cannot possibly know how much to invest and what infrastructure projects to fund. An agency that acts without concern for profit and loss has no way of gauging the opportunity costs of its investment spending. Since every investment must draw scarce capital away from other employments, funding of infrastructure by the government will necessarily create unseen costs in the form of all the investment opportunities that will have to be foregone because of it.

Apart from this basic theoretical problem of expansionary fiscal policy, there is nowadays above all the technical problem that global debt levels are already exorbitantly high. According to a recent study of the Institute of International Finance (IIF), global non-financial sector debt amounts to an incredible USD 215.5 trillion, or 325 percent of annual global economic output.[43]

"Status quo, you know, is Latin for 'the mess we are in'."
Ronald Reagan

Particularly the United States cannot afford to ignore this ominous trend. While Ronald Reagan at the beginning of his presidency still had sufficient leeway to add to public debt levels and engage in expansionary fiscal policy experiments, most of the ammunition was used up by the time Trump entered the scene. With public debt amounting to 105% of GDP, the US government is in the meantime buried in debt up to its neck. The following chart shows the trend in the US debt-to-GDP ratio and the annual federal budget deficit.

US public debt-to-GDP (left scale) and federal budget deficit (right scale)



Source: FRED, Incrementum AG

43 See https://www.iif.com/

"New CBO reports shows US debt on an unsustainable road to fiscal hell."
Peter Schiff

Apart from a few years during the "New Economy" bubble[44], the US runs chronic budget deficits year after year. Coming years don't hold out the slightest prospect of an improvement in the public debt situation. **Thus, the Congressional Budget Office (CBO) warned in its *Long Term Budget Outlook* released in March 2017 of an ever greater increase in the level of US government debt.** If current entitlement legislation is not amended, the public debt ratio on the federal level alone threatens to increase to 150% over the coming 30 years[45] - a level never before reached in US history, not even during war time.

"When there's already a lot of red ink, Keynes does not work."
Woody Brock

Alas, not only the sheer size of the public debt should be considered a cause for concern. The amount of economic growth seemingly purchased by taking on additional debt becomes ever smaller. We already discussed the phenomenon of the declining marginal utility of additional units of debt in detail in our *2015 In Gold We Trust* report.[46]

The declining marginal utility of additional units of debt

Decade	New Debt (bn. USD)	GDP Growth (bn. USD)	New Debt / GDP-Growth
1950 - 1960	33.6	243.1	0.14
1960 - 1970	90.4	497.4	0.18
1970 - 1980	528.1	1612.3	0.33
1980 - 1990	2297.3	3025.5	0.76
1990 - 2000	2422.4	4002.9	0.51
2000 - 2010	7900.1	4758.1	1.66
2010 - 2014	4265.7	2464.5	1.74

Source: FRED, Incrementum AG

A glance at the table above clearly shows that the allegedly wealth-creating "multiplier effect" created by adding ever greater amounts of debt is, at most now, generating anemic growth.

"Monetary policy has become asymmetric due to over-indebtedness. This means that an easing of policy produces little stimulus while a modest tightening is very powerful in restraining economic activity."
Lacy Hunt

It may well be more accurate to state that whatever growth does in fact occur, it probably occurs in spite of more debt being taken on, not because of it. Advocates of deficit spending tend to forget the illusory nature of the "growth" such spending seemingly generates – they never consider the obvious truism that every single dollar the government spends must first be taken from someone in the private sector (whether by taxation or by borrowing). Thus, every dollar of additional spending and investment by government curtails spending and investment by private citizens by precisely the same amount. The idea of "fiscal multipliers" seems to be a Keynesian fallacy akin to the infamous "accelerator principle". To believe in these beneficial effects, one has to believe that spending and investment by government bureaucrats is more efficient and profitable than spending and investment by the private sector. If that were true, North Korea and Venezuela would be islands of prosperity.

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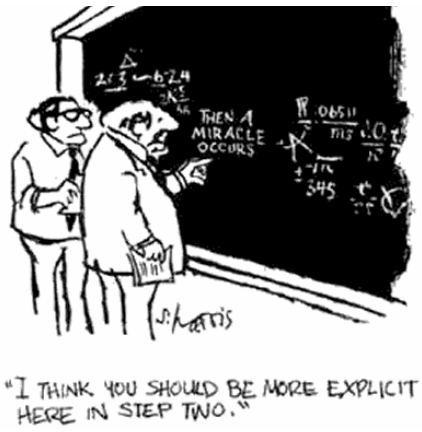
44 Arguably, the "surplus" of the bubble years was an accounting fiction, largely made possible by the ephemeral surplus of the social security fund and unsustainable revenues from taxes on capital gains.
45 See https://www.cbo.gov/system/files/115th-congress-2017-2018/reports/52480-ltbo.pdf
46 See In Gold we Trust 2015, p. 20-21

Studies purporting to prove the existence of a "fiscal multiplier" should be taken with a very large pinch of salt on two grounds:

1. it is just as easy to find studies proving the exact opposite effect; most of them are likewise based on empirical evidence.
2. More importantly, empirical evidence, i.e., the data of economic history, cannot be used to prove or disprove the correctness of logically sound economic theory - not least because there is no objective "measuring yardstick" and ceteris paribus conditions do not exist in the real world of constant economic change either.



Source: Sidney Harris

There are no constants in economics comparable to the constants of physics, hence all attempts at macro-economic measurement are flawed from the outset, and these flaws are more pronounced in a monetary system in which the money supply continually expands at breathtaking rates. When broad economic data aggregates show annual change rates in low single digits, they may well fall within a margin of error that is sufficiently large to make the results meaningless for all practical purposes. Moreover, many studies, particularly those purporting to be of predictive value or intended to provide after-the-fact justifications of specific economic policies, reflect either the wishful thinking of their authors or the wishes of their political masters.

Although Donald Trump has stated that the effects of his fiscal policy initiatives on the budget will be neutral, as they will merely shift line items within the budget around, it appears highly unlikely that this will be achievable – regardless of the Republican majority in Congress. The sheer size of the spending cuts that would be needed as an offset is simply too daunting to make such an undertaking a remotely realistic prospect.

Moreover, the baby boomer generation is beginning to enter retirement, which drives up social security spending, with Medicaid expenses likewise set for continued explosive growth. The announced tax cuts may well lower burdens on the private sector somewhat, but they are by no means going to mitigate the public debt problem. **There is hardly any leeway for an expansionary fiscal policy that involves additional government spending under such circumstances. A handful of individual projects may be launched for generating some media hype, but a substantial expansion in deficit spending must ultimately founder on the rocks of the mountain of previously accumulated debt.**

A federal value added tax could conceivably harbor substantial revenue generation potential, but attempts to introduce such a tax have hitherto never succeeded. **The sole source that might still provide sufficient funding to the government in support of higher deficit spending is the central bank.** That would divert resources from the private sector to the government in the form of the "hidden" inflation tax, which would be even more detrimental to the economy than other financing methods.

The fiat money system promotes systematic debt growth. As noted above, taking on additional debt goes hand in hand with ever lower economic growth. Such a trend is obviously not sustainable and makes us pessimistic with respect to the outlook for the Trump era. **Gold as the foremost monetary asset providing crisis insurance traditionally offers excellent prospects in this type of environment.**

d. The End of Globalization

"Nationalism is not a cause, it's a symptom. The cause is low growth. And the cause of low growth is too much debt."
Jim Rickards

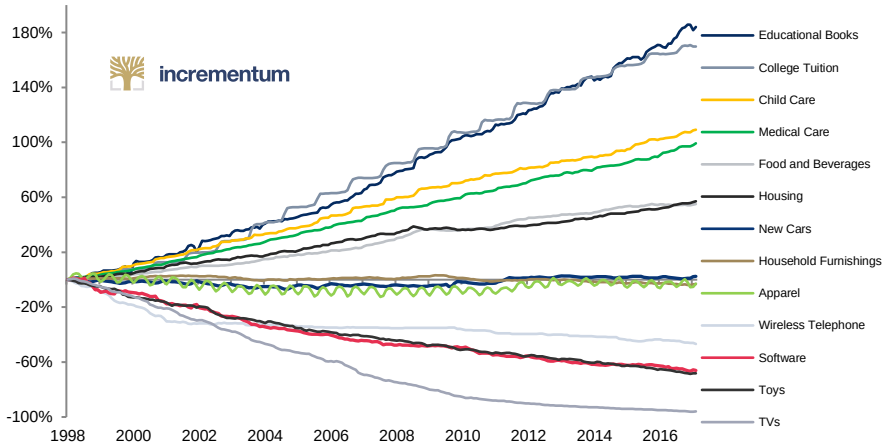
Apart from the obvious shift in preferences away from loose monetary policy toward loose fiscal policy, another significant trend change has become evident. 2016 may well turn out to have marked a notable political breaking point, paving the way toward the renunciation of economic and political globalization. Even though the reputation of globalization has been going downhill for quite some time in many people's eyes, definite political actions countering it – such as the beginning of the Brexit negotiations or the revocation of "free trade agreements" by Donald Trump - were initiated in 2016 for the very first time.

As Dr. Thorsten Polleit trenchantly demonstrates, two very different trends can be identified behind the term globalization, which have to be clearly distinguished[47]**: Namely, economic and political globalization.** The two phenomena have wildly different effects on human welfare, it is therefore necessary to draw a sharp line between them.

Economic globalization stands primarily for international trade and the global division of labor. In line with David Ricardo's economic theorem known as *the Law of Association*, it is of advantage to all participants, as it results in the placement of different production facilities at the economically most suitable locations. That in turn leads to an increase in the production of goods, which ultimately raises the purchasing power of all individuals in the marketplace. This increase in purchasing power is expressed by declining goods prices – a trend that is so strong, we can even observe it in today's environment of relentless monetary inflation. The chart below shows the trends in the prices of selected goods and services.

47 See *„Bewahrt die wirtschaftliche Globalisierung („Preserve economic globalization")*, Prof. Thorsten Polleit, Schweizerzeit.

Price trends of various selected goods and services in the US since 1998



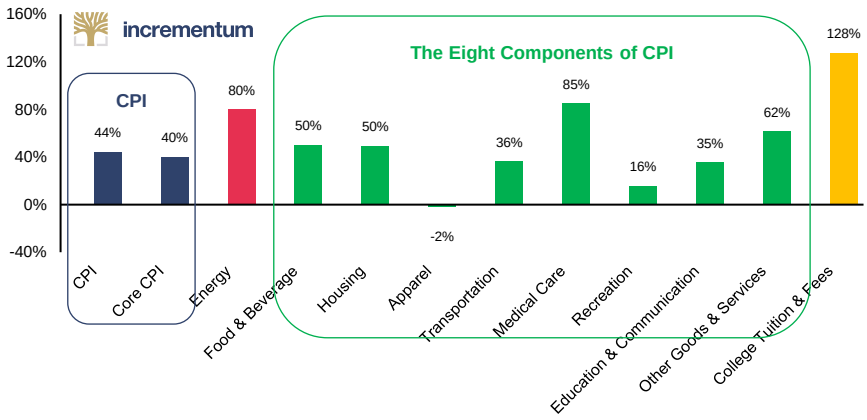
Source: BLS, Incrementum AG

"Economic activity unites us, politics divides us."
Roland Baader

"No-one was ever impoverished by too much trade, only by too little of it."
Rahim Taghizadegan

As can be seen, the prices of goods that are traded internationally and are subject to relatively little government intervention have declined the most over time. That applies to TV sets, toys, software, etc. On the other hand, it can also be discerned that the prices of products and services which are primarily produced or supplied domestically and are subject to a great deal of government intervention have experienced the largest increases. It is not surprising that the prices of specialized literature (i.e., academic literature), tuition fees, as well as health care and child care have risen exorbitantly.

8 components of CPI: price development in the US since 2000



Source: Federal Reserve St. Louis, Incrementum AG

The Institute for Research in Economic and Fiscal Issues (IREF) confirms that this empirical observation applies to price trends in Germany as well. In an essay entitled *"Consumer prices under the magnifying glass: more government, higher relative prices"*, the authors come to the conclusion that there is a tendency for large increases in the relative prices of goods which are either supplied by the government itself, or are subject to massive

"When people complain of your complexity, they fail to remember that they made fun of your simplicity."
Michel Bassey Johnson

government interventionism.[48] By contrast, it can be observed that intense competition leads to both declining prices and increasing quality over time.

The term *political globalization* refers to increasing cross-border centralization of government power for "steering" the economy. According to this *dirigisme*, people are not supposed to trade with each other voluntarily, instead their exchanges are to be shaped in accordance with political and geostrategic deliberations and goals.

It is precisely this type of globalization that is now faced with a substantial counter-weight in the form of the Brexit vote and Donald Trump's *America First* policy, which represent an obstacle to further centralization. While this should be welcomed for a variety of reasons, it harbors the danger that economic globalization will be rolled back as well.

A relapse into protectionism would have significant negative consequences for prosperity. Tariffs or other trade impediments raise the prices of products and lower the purchasing power of consumers. As a result, the latter will no longer be able to consume and save as much as previously, i.e., everybody's standard of living will be lowered. **Often protectionist measures are also the harbingers of increasing alienation.**

As our friend, the economist and philosopher Rahim Taghizadegan remarks:

"Frédéric Bastiat noted that when goods don't cross borders, armies will. Often protectionism is a preliminary stage to war. Trade results in people from foreign cultures becoming familiar with each other; moreover, a steadily growing number of people will strive to avoid endangering their livelihood through a hostile attitude."[49]

A protectionist déjà vu?

Trump's protectionist measures such as proclaiming the termination of the Trans-Pacific free trade agreement TPP, or the introduction of punitive tariffs on European steel are highly reminiscent of actions taken by Ronald Reagan in the early 1980s. At the time, it was particularly Japan that had been identified as a new threat. The Japanese were accused of engaging in "unfair" trade, and the goal was specifically to reduce the large US trade deficit with Japan. Protectionist measures such as import restrictions and tariffs were supposed to provide a remedy.

It was no use whatsoever. Either the Japanese increased their US-based production or they were able to win over US consumers in spite of having to charge higher prices. The policies didn't succeed in decreasing the US current account deficit with Japan either.

e. Conclusion

As discussed in this section, the economic foundation of many developed countries appears to be anything but sustainable. This applies particularly to the US, on account of the country being neck-deep in debt. Donald Trump is therefore likely to be faced with challenges that will be very different from those confronting Ronald Reagan nearly 36 years ago. While the environment in the first several years of Reagan's administration was characterized by high interest rates and high consumer price inflation rates on the cusp of entering a long-term downtrend, the exact opposite applies to the environment in which Trump finds himself.

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[48] See: http://de.irefeurope.org/Verbraucherpreisindex-unter-der-Lupe-Mehr-Staat-hohere-relative-Preise,a1215
[49] Taghizadegan, Rahim: Alles, was Sie über die Österreichische Schule der Nationalökonomie wissen müssen: Einführung in die Austrian Economics (All you need to know about the Austrian School of Economics: An Introduction) Finanzbuch-Verlag, page 90

"There is only one way to promote industrialization: the accumulation of capital. Protectionism merely results in redirecting investment from one branch of industry to another."
Ludwig von Mises

Historically low and even negative interest rates have largely exhausted the room for maneuver of monetary policy. A fresh round of expansionary fiscal policy seems hardly possible in view of the budgetary situation. At least it would be hard to imagine without active support by the central bank, as it would be nigh impossible to finance it by other methods.

All these developments are connected to the fiat money system currently in place. While the global system of irredeemable paper money at the time Reagan was sworn in was still in its infancy at 10 years of age, it is fully grown today; more precisely, it is beginning to look like a decrepit old leper on the verge of multiple organ failure. **This kind of environment is traditionally very favorable for gold as a monetary asset with crisis insurance characteristics.**

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The De-Dollarization: Good-bye Dollar, Hello Gold?

Key Takeaways

- What indications are there that the world is turning its back on the US dollar? And what are the clues that gold's role could be strengthened in a new system?
- Central banks and governments have long been aware that the dollar has a sell-by date as a reserve currency. But it has taken until now for the subject to be discussed openly.
- We could imagine an increase of the role of gold in case of the next financial crisis.
- Exclusive Interview with Dr. Judy Shelton, Economic Advisor to President Trump.

"There is a good case to be made that a shift in emerging markets toward accumulating gold would help the international financial system function more smoothly and benefit everyone."

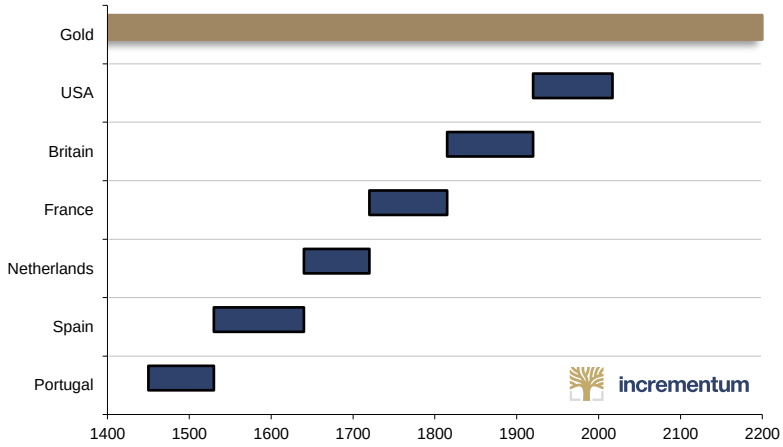
Kenneth Rogoff

"Countries that have been exporting to the US and accumulating dollars in return are increasingly getting the joke, but they aren't laughing."
Luke Gromen

The issue of when a global reserve currency begins or ends is not an exact science. There are no press releases announcing it, and as rule neither are there big international conferences that end with the signing of treaties and a photo shoot. All we have are on the one hand historical facts, and on the other hand political and economic evidence.

In 2012, Michael Cembalest[50] produced a chart that has been much copied since and that has made the rounds many times. It shows the phases during which different senior currencies were globally dominant back to the 15th century. The list includes the currencies of Portugal, Spain, the Netherlands, France, Great Britain and the US.[51]

Global reserve currencies since 1400



Source: Incrementum AG, based on a chart by JP Morgan - Michael Cembalest

"History STRONGLY suggests betting on the people with all the guns and most of the money. If they want the USD to be devalued, it is going to be devalued."
Luke Gromen

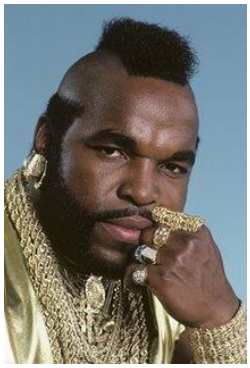
For considering the present situation we can only examine the eras of British pound and US dollar dominance as valid yardsticks, as the world of the 18th century and before cannot be compared to the world of the 21st century in this respect. However, three fundamental conclusions can be drawn from this list.

- The dominant currency is always issued by the economically dominant country of the respective era

- **Gold (and to a lesser extent silver) has always played a decisive role when the changeover from one global currency to another one took place**. One can roughly speak of a revaluation of real assets (gold) against financial assets (currencies) during these changeovers

- The third conclusion is already anticipated in the title of the chart by JP Morgan: *"Reserve currency status does not last forever"*. At some point, they all have to leave the stage. Will this hold for the almighty US dollar as well?

[50] Chairman of Market and Investment Strategy, JP Morgan Asset Management, "Eye on the Market", 2012
[51] In our 2014 In Gold we Trust, we have allowed us to add gold to the graph.



The fact that the issue has been on the radar of a powerful bank like JP Morgan since at least five years, should give one pause. Questions regarding the global reserve currency are not exactly discussed on CNBC every day. Most mainstream economists avoid the topic like the plague. The issue is too politically charged. However, that doesn't make it any less important for investors to look for answers. On the contrary.

As the following table shows, gold has always played an important role for the dominant global reserve currency. No-one could have put it more pithily than renowned gold expert Mr. T.[52]: *"I believe in the golden rule – the man with the gold... rules."*

Relative gold treasure: change in the share of global gold reserves (1880-2016)

	National gold reserves as percentage of total official holdings										
	US	UK	Germany	Italy	France	Switzerland	Russia	China	Belgium	Netherlands	Austria
1880	18.2	14.8	7	1.9	21.1	1.2**	17.0	-	1.8	3	4
1900	19	6.2	6.6	3.6	17.1	0.9	20.8	-	1	0.9	10.1
1920	32.6	7.6	3.5	2.7	14.4	1.3	-	-	0.6	3.4	0
1940	75.7	5.7*	0.2*	0.5	6.9	1.7	-	-	2.5	2.1	0.2*
1960	44.1	6.9	7.4	5.5	4.1	5.4	-	-	2.9	3.9	0.7
1980	22.9	1.6	8.3	5.8	7.1	7.2	-	1.1	3	3.8	1.8
2000	24.5	1.6	10.4	7.4	9.1	7.5	1.2	1.2	0.8	2.7	1.2
2016	24.8	0.9	10.3	7.5	7.4	3.2	4.5	5.5	0.7	1.9	0.9

Source: World Gold Council, OMFIF Estimates

In this section, we want to answer three questions: what clues are there that the world is turning away from the US dollar? How has this situation evolved historically? And what role is played by gold in this change of the currency system?

a. Where we stand today

"The decisive new global reality was the appearance on the world scene of America as simultaneously the richest and militarily the most powerful player. During the latter part of the 20th century no other power even came close. That era is now ending."
Zbigniew Brzezinski

The mechanism underlying today's "dollar standard" is widely known and the term "petrodollar" describes it well. This system is based on an informal agreement the US and Saudi Arabia arrived at in the mid 1970s. The result of this deal: Oil, and consequently all other important commodities, is traded in US dollars – and *only* in US dollars. Oil producers then "recycle" these "petrodollars" into US treasuries. This circular flow of dollars has enabled the US to pile up a towering mountain of debt of nearly USD 20 trillion – without having to worry about its own financial stability. At least, until now.

For a long time the basis on which this global currency system rests was poorly documented. Finally, Bloomberg published a comprehensive article in May 2016, which provided detailed confirmation of the agreement that was hitherto only

[52] https://en.wikipedia.org/wiki/Mr._T

known as a rumor.[53] The fact that this article is published now also represents a subtle clue that there are simmering shifts in the global currency system.

"I am just proposing that emerging markets shift a significant share of the trillions of dollars in foreign-currency reserves that they now hold (China alone has official reserves of $3.3 trillion) into gold."
Kenneth Rogoff

The trend becomes ever more tangible and can be described by the following term: de-dollarization. The world is looking for alternatives to the dollar – and finds them more and more often. At the same time the big oil producers and the largest exporters have stopped accumulating US debt securities. In one sentence: Since 1973 the dollar standard has been based on "usage demand" for dollars – they were needed. But when China and Russia find alternatives for their bilateral trading activity, they need fewer dollars. The same applies to European countries which have adopted the euro since 1999.

b. De-Dollarization – the Beginning

"A rise in gold prices would close part of the gap between demand and supply for safe assets that has emerged due to the zero lower bound on interest rates."
Kenneth Rogoff

Central banks and governments have long been aware that the dollar has a sell-by date as a reserve currency. But it has taken until now for the subject to be discussed openly.

Thus, former US secretary of state John Kerry made remarks on the US dollar in 2015 in the course of a press conference on the nuclear agreement with Iran. Kerry was asked why the US had entered into agreement – instead of rejecting it and threatening all signatories with sanctions. Kerry replied by recounting the genesis of the deal: "*I went to China. We persuaded China: don't buy more oil. We persuaded India and other countries to step back. Can you imagine trying to sanction them after persuading them to put in place sanctions to bring Iran to the negotiating table. And when they not only have come to the table but they made a deal - we turn around and nix the deal. And then tell them you have to obey our rules under sanctions anyway. **That is a recipe - very quickly, my friends, business people here - for the American Dollar to cease to be the reserve currency of the world. Which is already bubbling out there.***[54]

As far as we know this is to date the only statement of a US government official on the international status of the dollar – and an admission from the highest levels that the process of de-dollarization is indeed underway. Or as Kerry put it, "*is already bubbling out there*".

*"I have warned that whenever a government creates a solution to any crisis, that solution becomes the next crisis. This is what I have called **the Paradox of Solution**."*
Martin Armstrong

There have been many attempts by various nations to undermine the dollar's preeminence in recent decades. Some were nipped in the bud by US interventions – such as the plan of Iraq's former dictator Saddam Hussein to sell oil for euros.[55] Or the rumored plan of Libya's eccentric ruler Muammar al-Gaddafi to issue a pan-African gold currency.[56]

Others are less well known, but are indeed continuing to "bubble" below the surface: For example, since 2008, an agreement exists between Saudi Arabia, Kuwait, Bahrain and Qatar which provides for the creation of a monetary union. The planned new currency is nicknamed – rather unimaginatively – the

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53 See "The Untold Story Behind Saudi Arabia's 41-Year U.S. Debt Secret", Bloomberg 30.05.2016
54 See "Kerry warns of Dollar collapse", YouTube 13.08.2015
55 See: "Petrodollar or Petroeuro", Cóilín Nunan, Feasta Review Number 2
56 See: "Libya: another neocon war", David Swanson, Guardian 21.04.2011

"gulfo". "*The project is inspired by the European currency union, which is seen as a great success in the Arab world*", according to an article by Telegraph journalist Ambrose Evans-Pritchard. He inter alia quotes Nahed Taher, the CEO of Bahrain Gulf One Investment Bank: "*The US dollar has failed. We need to delink from it*".[57]

One cannot possibly express it more clearly. The agreement between the gulf states has given birth to an institution as well: the Gulf Monetary Council (GMC). This Saudi Arabia-based bureaucracy has been tasked with preparing the introduction of the common currency.

"Once is coincidence, twice is happenstance, three times is enemy action."
Auric Goldfinger

However, it appears the plan has been put on hold in recent years. As recently as mid 2013 a statement was issued according to which the common currency was going to be put in place "by 2015 at the latest". Today it is no longer even talked about. Moreover, other potential members such as the United Arab Emirates or Oman have so far failed to join the club. One should nevertheless keep an eye on developments in the Gulf.

A clear signal that something is afoot would be the abolition of the Saudi riyal's peg to the US dollar. As recently as in April of this year economist Nasser Saeedi advised Middle Eastern countries to prepare for a "new normal" - and specifically to review the dollar pegs of their currencies: "*By 2025 it is clear that the center of global economic geography is very much in Asia. What we've been living in over the past two decades is a very big shift in the political, economic, and financial geography.*"[58]

In view of the euro's role model function, the plan of Arab countries to introduce a common currency by 2015 was always quite ambitious. But the role model was a good choice. Without understanding the history of the euro, one cannot understand the strategy of Russia and China with respect to gradual de-dollarization either.

It took the EU member countries more than four decades to create a common currency. Since the end of World War II the euro project has been the first serious alternative to the US dollar. **Not least because members of the euro system together hold nearly 10,800 tons of gold as part of their currency reserves, which are marked to market on a quarterly basis**.[59] The result is a tension-free relationship between the paper currency and gold as a reference point – and a system that is the diametrical opposite of the classical gold standard: If the gold price rises, central bank balance sheets are strengthened. Russia and China have in the meantime decided to mimic this trick of the Europeans.

China, Russia and Europe

While the role of oil-producing countries (and particularly Saudi Arabia) shouldn't be underestimated, at present the driving forces with regard to de-dollarization are primarily Moscow and Beijing. We want to take a closer look at this process.

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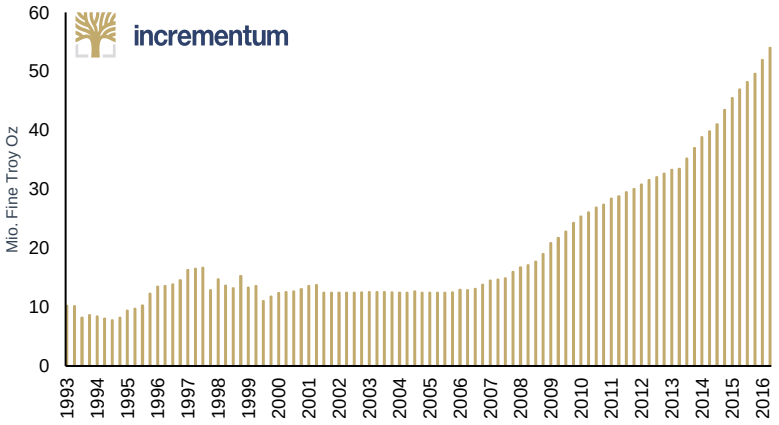
57 See: "Gulf petro-powers to launch currency", Telegraph, 15.12.2009
58 See: "Middle East economies must adapt to 'new normal', expert says", Gulf News, 17.04.2017
59 See: „Der Euro und das Gold, auf ewig geeint" („The euro and gold, forever united"), Nikolaus Jilch, Die Presse

"The more gold a country has, the more sovereignty it will have if there's a cataclysm with the dollar, the euro, the pound or any other reserve currency."
Evgeny Fedorov

There exist numerous political statements in this context which leave no room for doubt. The Russians and Chinese are quite open about their views regarding the role of gold in the current phase of the transition. Thus, Russian prime minister Dimitri Medvedev, at the time president of Russia, held a gold coin up to a camera on occasion of the 2008 G8 meeting in Aquila in Italy.

Medvedev said that debates over the reserve currency question had become a permanent fixture of the meetings of government leaders. Specifically, he spoke of the introduction of a new "*set of reserve currencies*". Then he was asked about the possibility of a "*supra-national currency*". His reply: "*I happen to have good news. I have such a supra-national coin in my pocket. It was a present. (...) Here it is. You can see it and touch it.*"[60]

Russian Gold Reserves (Mio. troy oz.)



Source: Bloomberg, Incrementum AG

"... As physical gold's spatial liquidity increases, economic agents will be less willing to hold credit money such as the dollar."
Daniel Oliver

Almost ten years later, the topic "currencies and gold" is on the Sino-Russian agenda again. In March, Russia's central bank opened its first office in Beijing. Russia is preparing to place its first renminbi-denominated government bond. Both sides have intensified efforts in recent years to settle bilateral trade not in US dollars, but in rubles and yuan. Gold is considered important by both countries.

"*We have discussed questions concerning the gold trade*", said Sergey Shvetsov, vice president of Russia's central bank. "*The BRICS countries are large economic areas with big gold reserves and an impressive capacity for production and consumption of this precious metal. In China, the gold trade takes place in Shanghai. In Russia in Moscow. Our idea was to link these two cities, in order to boost trade between these two markets.*"[61]

With that, Russia and China are pursuing a strategy that has been long envisaged. Russian president Vladimir Putin announced in the summer of 2014 that Russia should sell oil and gas in rubles and other currencies, as the monopoly of the US dollar harmed the Russian economy. "*We should proceed cautiously*", Putin stated. Two years later Russian oil exports to China have increased by more than 50 percent.

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60 See "Russian President pulls new world currency from his pocket", Telegraph, 10.07.2009
61 See: "Moscow and Bejing join forces", ZeroHedge, 02.04.2017

One of the most important milestones on the path from the unipolar dollar standard to a multi-polar system with several reserve currencies was the establishment of a Chinese gold fixing in Shanghai a little over a year ago. An interesting detail: the yuan gold price is fixed in grams rather than troy ounces.[62]

"OPEC was made redundant once oil began being priced in both CNY & USD, because the position of the lowest cost producer shifts from the nation with the lowest USD production costs to the nation with the cheapest currency vs. gold."
Luke Gromen

The importance of the establishment of the Shanghai gold fixing should not be underestimated. Analyst Luke Gromen[63], whom we hold in the highest esteem and who has studied these developments regularly for a very long time, simply refers to it as "the reopening of the gold window by China". Not only is China now able to print money (renminbi/yuan) in order to import commodities. It also guarantees gold convertibility to oil producers through the Shanghai gold window.

At the 2015 LBMA Bullion Market Forum, China's strategy was explained in detail by Chinese central banker Yao Yudong. The title of his presentation: "*The world needs a new reserve currency*." Gold represented a "*super-sovereign reserve currency*" according to Yao. Nevertheless, the gold market was not able to counter a potential liquidity crisis on its own. That would be when the RMB was going to come into play.[64] And it seems that the SGE is getting more and more important these days. Withdrawals on the SGE were a massive 555 tons in Q1 2017. That is a run rate of 2,220 tons, or roughly 80% of global gold mine supplies. However, for some reason not a single mainstream financial media service even mentioned this.[65]

In his discussion of the impending start of the SGE (Shanghai Gold Exchange) the Chinese central banker also went into specifics regarding the role of gold in the internationalization of the renminbi. That is an extremely important point for gold investors. The representatives of the euro, ruble and renminbi are not concerned with gold as such. Gold is merely a means to an end, which is perfectly suitable for said end – namely disengagement from the dollar monopoly. "*The key role of an international currency*" was "invoicing" according to Yao. "*Currently all global commodities are denominated in USD*". And then: "*The renminbi has the potential to become the invoicing currency for gold.*" He mentioned that China was the largest gold producer and consumer demand for gold was growing rapidly.

If we look ahead two years, the following picture emerges:

- According to the head of Iran's central bank, Iran now exports its oil exclusively for euros – with the exception of exports to China, which are invoiced in renminbi.
- Last September China, overtook the US as the world's largest oil importer.
- For several years, China has been making a great effort to establish the renminbi as an international currency. This process has led to the

62 See: In Gold we Trust 2016
63 See: FFTT, Luke Gromen, ffttt-llc.com
64 See: "The World Needs New Reserve Currency", Yao Yudong, 25.06.2015
65 See: "Gold withdrawals on SGE a massive 555 tons in Q1 2017"

inclusion of the renminbi in the currency basket of the IMF's special drawing rights.[66]

- Due to Russia and China using their own currencies in direct bilateral trade, the process has accelerated massively.
- According to the Russian news agency Sputnik, the following countries have replaced the USD in bilateral trade either partly or entirely: Russia, Kazakhstan, Belorussia, Armenia, Turkey, Iran, Egypt, China, North Korea, Japan (in trade with China), Vietnam, Thailand, Sri Lanka, Australia (in trade with China), UAE, South Africa, Argentina, Uruguay and Brazil
- **At the same time, practically all these countries are expanding their gold reserves noticeably, which US economist Kenneth Rogoff (oddly enough) has recently urged them to do.**67

c. The Consequences of De-Dollarization

The gradual move away from the USD to a multi-polar monetary order has several important effects, which only make sense when viewed through this lens.

Source: Merk Investments

Contrary to what is asserted in most mainstream reports, oil-producing countries are not so much interested in a much higher oil price in USD terms, but rather in competition for market share. They are increasingly able to choose in which currencies they want to trade.

The most important effect has become evident since 2014: two of the largest holders of US treasuries (China and Saudi Arabia) have abandoned their support of Washington. Since then foreign exchange reserves have retreated globally. In the media this is usually explained by pointing to the fact that the countries concerned are forced to defend their currencies. Partly that is undoubtedly correct. What this explanation glosses over though: If the emerging superpower China is able to pay for oil with freshly printed renminbi, it simply no longer needs the USD three trillion worth of US treasuries it has amassed. China's central bank has frequently mentioned this, in a straightforward and transparent manner: We don't need the dollar reserves anymore.[68]

On the other hand, oil producers have no interest in recycling their revenues as "petrodollars". Either Beijing is getting this money – or it is invested elsewhere. For instance in gold, through the Shanghai gold window. Or in European government bonds – even though there is no euro gold window, the euro is already the second-most important reserve currency after the US dollar, and as such remains more popular than the renminbi.[69]

The second effect: the question of whether there is a threat that the petrodollar agreement could end no longer arises. This pact, which was never formalized anyway, appears to be obsolete already. **The process of moving away from**

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66 See: In Gold we Trust 2016
67 See: "Emerging markets should accumulate gold", Kenneth Rogoff, 03.05.2016
68 See: "No 'bottom line' for yuan or forex reserves", Reuters, 13.03.2017
69 See: "The international role of the euro", ECB, July 2015

the dollar – prepared by Europe and triggered by China and Russia – can no longer be stopped. And as a "supra-national" reserve asset, gold plays an important role in it.

d. The Gold Bugs in the Trump Administration

"Are people noticing that the Trump economics team is shaping up as a gathering of gold bugs?"
Paul Krugman

Naturally, the US administration hasn't failed to notice these developments, as the statements of former US secretary of state John Kerry reveal. The extent to which the Obama administration was aware of the dollar problem is also illustrated by the work of Jared Bernstein, an economic advisor to former vice president Joe Biden. In 2014 he published an op-ed in the New York Times, tellingly entitled "**Dethrone King Dollar**".[70]

One passage reads: "*New research reveals that what was once a privilege is now a burden, undermining job growth, pumping up budget and trade deficits and inflating financial bubbles. To get the American economy on track, the government needs to drop its commitment to maintaining the dollar's reserve-currency status.*"

"If the United States would take this first step toward linking the dollar to gold, it would send a signal of America's commitment to restoring the integrity of the dollar as a meaningful unit of account and reliable store of value."
Judy Shelton

It appears ever more obvious that the topic is also on the radar of the administration of Donald Trump. During a press conference with Japanese prime minister Shinzo Abe in February, the president allowed himself to get carried away into making the following cryptic remark: "***Currencies are going to be on a level playing field much sooner than many people think***".[71] The deliberate devaluation policies of other countries, particularly those of China, are in the cross-hairs of both Trump and Bernstein. Trump and his administration have to date left open how they plan to bring the world's currencies to a "level playing field", i.e., move them toward equal competition conditions. As long as the dollar enjoys its special status as the global reserve currency, there is simply no chance of that becoming reality. If the global currency "playing field" is to be "level", what must come next (to avoid a catastrophic outcome) is a new "reserve asset" that must be made "big enough" to settle global trade imbalances; once it is, all currencies would be, as Trump said above, "on a level playing field."

In view of Trump's aggressive „America first" rhetoric, it would be quite strange for the US to relinquish this special status voluntarily – but it can by no means be ruled out. Donald Trump is and will remain unpredictable. On several occasions Trump has called the dollar "overvalued", argued in favor of lower interest rates and has given other hints of favoring a policy of currency devaluation (see infobox).

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[70] See: "Dethrone 'King Dollar'", Jared Bernstein, "New York Times" 27.8.2014
[71] See: "Trump Vows 'Level Playing Field'", Bloomberg, 10.2.2017

Donald Trump – A Gold Bug?

"I am a low interest rate person. If we raise interest rates and if the dollar starts getting too strong, we're going to have some very major problems."

"This is the United States government. First of all, you never have to default because you print the money."

"**The Dollar is too strong.** Our companies can't compete with them now because our currency is too strong. And it's killing us."

"The golden rule of negotiation: He who has the gold makes the rules."

"We used to have a very, very solid country because it was based on a gold standard. We don't have the gold. Other places have the gold."

"I have been complaining about currency devaluations for a long time. I believe that we will all eventually, and probably sooner than people understand or think, be **on a level playing field** because that's the only way its fair."

A weaker dollar would not least be urgently needed to rebuild US industry and restore its international competitiveness, as Trump envisages and has promised. Moreover, Trump himself, as well as his advisors, seem to have quite a good grasp of the importance of gold in the international monetary system.

While Europe, Russia and China treat gold as a separate reserve asset distinct from their foreign exchange reserves, the value of which is market-determined, US thinking continues to be firmly oriented toward a "gold standard", that is to say, the idea that the currency is rigidly tied to gold. To this day, US gold reserves are indeed carried at a value of 42.22 USD per ounce on the Federal Reserve's balance sheet – i.e., the last official gold/dollar exchange rate prior to the end of the Bretton Woods system in 1971.[72]

Here is Donald Trump in his own words: *"Bringing back the gold standard would be very hard to do, but boy, would it be wonderful. We'd have a standard on which to base our money."*[73] Donald Trump's view is supported by none other than former Fed chairman Alan Greenspan. As is well-known, the "maestro" has confessed to being a fan of the gold standard decades ago already, and evidently, he has made it his mission in recent years to bring the message of the gold standard's beneficence to the benighted US mainstream media (no doubt a mission of atonement).

And that is far from all. Trump's vice president Mike Pence is a declared fan of the gold standard as well. Pence argued in favor of a "stable monetary policy" in 2010. In a speech delivered in Detroit he said at the time: *"My dear friend, the late Jack Kemp, probably would have urged me to adopt the gold standard, right here and now in Detroit. Robert Zoellick, the president of the World Bank, encouraged that we rethink the international currency system including the role of gold, and I agree.* ***I think the time has come to have a debate over gold, and the proper role it should play in our nations monetary affairs. A pro-growth agenda begins with sound monetary policy."***[74]

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[72] As is well known, Nixon suspended the exchange of dollars for gold at this rate only "temporarily", hence there is no reason to apply a different rate…

[73] See: "Donald Trump Weighs in...", GQ Magazine

[74] See: "Rep. Mike Pence Suggests That The U.S. Return To The Gold Standard", Think Progress, 29.11.2010. A side note: Jack Kemp was a prominent Congressman and supply-sider, who strongly influenced Reagan's program of tax cuts. He incidentally was a lifelong supporter of the gold standard and served on the Gold Commission with Ron Paul et al. He also held interesting views on soccer as compared to "real football".

"Mr. Trump does not know it, but applying a policy of protectionism for American industry through tariffs on imports means the death of the world's monetary system based on the dollar."
Hugo Salinas-Price

It should be noted here that a just few days before Pence delivered the above mentioned speech, Robert Zoellick had to weather a barrage of criticism for his remarks on gold. At the time he felt compelled to clarify his stance: "*I'm not advocating a return to the 19th century, when the money supply was linked to gold*"[75] He did however repeat his statement that gold had already established itself as a "reference point". That was what his proposal was all about as well, Zoellick insisted. A new currency system should *"consider employing gold as an international reference point of market expectations about inflation, deflation and future currency values. Although textbooks may view gold as the old money, markets are using gold as an alternative monetary asset today.",* according to the then president of the World Bank.[76]

In our opinion, the statements of Trump, Pence, Greenspan and Zoellick are compatible with the above discussed process of de-dollarization, a move toward a system of free-floating currencies that use gold as the most important international reference point. It would be incorrect to use the term "gold standard" in this context though, as the goal would not be a return to a system of fixed exchange rates similar to the one prevailing under the "classical gold standard" of the 19th century.

Another cryptic statement Donald Trump made in 2015 is also quite interesting in this context. A return to a gold standard would be very difficult, he said at the time. "*We don't have the gold. Others have the gold*".[77] Could it be that gold aficionado Trump is not aware of the fact that the US holds more than 8,000 tons in gold reserves? Was his statement simply ill-considered? Or was he trying to get certain points across? For instance, the fact that the US cannot bring its gold into play as long as it is legally valued at USD 42.22 per ounce?

Whatever the case may be, there are definitely experts close to Trump who have firmly set their eyes on the return of a "classical gold standard" and the associated system of fixed exchange rates (to be precise, if gold were used as money all over the world as it once was, speaking of "exchange rates" would essentially be superfluous). Judy Shelton, an economist and Trump advisor has studied the issue for a long time. She describes her proposed plan in a paper published in 2015.[78]

Her influence on Trump's rhetoric with respect to currency policy is hard to miss. "*How can America promote the virtues of economic opportunity and honest competition in an open global marketplace while allowing currency disorder to distort the terms of trade?*", Shelton asks. She praises the Bretton Woods gold exchange standard, which tied the dollar and all other currencies to gold. She criticizes the system of freely floating exchange rates, which she avers by no means represents a free market system, as long as central banks have a currency monopoly. Nevertheless, Shelton says, nowadays economists accept the paradigm of freely floating exchange rates with the same conviction with which economists in

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[75] See: "Zoellick: Back to the future" "Zoellick zurück in die Zukunft", ntv 10.11.2010
[76] See: "Neuer Gold-Standard für alle" - „A new gold standard for everyone" , ntv 8.11.2010
[77] See: "Conversation with the Candidate: Donald Trump, WMUR9, 27.3.2015
[78] See: "Fix what broke: Building an orderly and ethical international monetary system", Cato Journal Vol. 35, No. 2 (Spring/Summer 2015)

the past accepted the gold standard "as *the most rational and efficient approach to structuring international monetary relations*".

Shelton comes to the same conclusion that Trump, Pence, Greenspan and Zoellick arrived at: the currency system needs an anchor again. It doesn't have to be gold – theoretically. "*It may be possible to designate some other unit of value that is universally recognized, readily accessible to individuals, yet highly utilized by governments as a monetary reserve asset. But can anyone think of a better reference unit than gold to serve as a monetary standard?*"

"Significant increases in inflation will ultimately increase the price of gold. Investment in gold now is insurance. It's not for short-term gain, but for long-term protection."
Alan Greenspan

Shelton's view differs from that of e.g. Zoellick on a major point - namely, she definitely *does* eye a return to a "classical gold standard". She inter alia proposes the introduction of gold-linked US treasury bonds. These would be *"redeemable at maturity for a fixed amount of dollars or a specified amount of gold, at the option of the bondholder*".[79] If the US were to take this first step toward linking the dollar with gold again, it would send a signal that it planned to restore the dollar's integrity. Other countries would eventually follow this example. The end result, according to Shelton: *"An increasingly broader group of countries and successively larger set of gold-linked offerings should lead to greater monetary stability and effectively, fixed exchange rates among participating currencies".*[80] In addition, Shelton points out: since the IMF prohibits its members from tying their own currencies to gold, even an exit from the IMF would have to be considered.

Of course, the idea of a gold-backed dollar is not new. Shelton's proposal of effectively reintroducing gold cover so to speak through the backdoor, has a flaw in our opinion: since Europe and Asia have already committed themselves to valuing their gold reserves based on market prices, their return to a "classical gold standard" with fixed exchange rates is blocked. At least, for the time being. At the same time, they are blocking such a return for the US as well, since a free market price for gold would likely lead to an outflow of gold from the US – provided the market price trades at a higher level than the dollar gold price set by the US.[81] **The end result could be very similar to the Bretton Woods end game and the US president could eventually be forced to close the gold window again.**

This summary of the measures taken, and the ideas voiced in Europe, Russia, China, the Arab world, as well as the US, leads us to several conclusions – and a number of open questions.

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[79] See: Shelton 2015, 2012
[80] Shelton 2010
[81] See: "Currency Wars: Why The United States Cannot Return To A Gold Standard", victorthecleaner.wordpress.com, 22.02.2012 Note: If market prices were lower than the official US dollar/gold exchange rate, gold would flow into the US. Given the larger supply of gold in the rest of the word, the difference would presumably be arbitraged away quickly. In the event of a higher market price, the known limited amount of official US gold reserves may not suffice to produce a similar effect before the outflow would reach destabilizing proportions.

"A pile of rock ceases to be a rock when somebody contemplates it with the idea of a cathedral in mind."
Antoine St. Exupery

The Conclusions:

- Obviously, the negative effects of the prevailing dollar-centric currency system are acknowledged both in the US and in other important countries.
- The establishment of the euro, the plans for a "gulfo", as well as the growing monetary cooperation between emerging market players such as China and Russia all represent steps toward a "multi-polar" future.
- Europe, China, Russia and the Arab countries aren't exactly making a big secret out of the fact that gold is supposed to play an important role in this envisaged future.
- In the meantime, a US president is in charge, who calls a return to gold as a monetary standard desirable and talks about a "level playing field" between currencies.
- For now, Washington has not yet adopted the valuation of gold reserves at their market value while plans to revive a classical gold standard exist. **From our point of view, the remonetisation of gold will happen within the context of the next financial crisis.**

The Questions:

- Will a new currency system architecture be introduced through a formal process (such as e.g. a conference in the G20 framework), or through an (arguably already underway) revaluation of gold reserves by the market?
- Will the US adopt the proposal of economist and Trump advisor Judy Shelton and issue gold-backed bonds – or will it join the "euro model" of marking gold reserves to market?
- Or alternatively, will the "rest of the world" abandon valuation of gold reserves based on market prices and follow the US into a system of fixed exchange rates similar to the "classical gold standard"?

"The business of central banks is like pornography: It's not the real thing."
Eugene Fama

Regardless in which form or function gold returns to the currency system, its price will probably rise. Bloomberg Intelligence has actually examined a hypothetical scenario for China, roughly similar to the gold bonds proposal by Judy Shelton and according to its calculations, China would in theory already be able to adopt a gold standard. **However, only at a gold price equivalent to USD 64,000 per ounce.**[82]

Addendum:

A few weeks ago, president Donald Trump has left the US for his first foreign trip. The first country he visited? Saudi Arabia. We interpret this as a sign that the US-Saudi Arabia alliance is intact. Considering that the president secured more than USD 100 billion in arms purchase commitments from the Saudi royals one can almost hear Donald Trump saying "Dear King Salman, I have come to offer you a deal…").

To this it should be mentioned that Donald Trump made clear already during his campaign that he intended to rescind the Obama administration's policy of

[82] See "Chinese Gold Standard Would Need a Rate 50 Times Bullion's Price", Bloomberg 20.05.2015

rapprochement with Iran (terming the nuclear agreement the "*worst deal he ever saw*"). With respect to the US relationship with Saudi Arabia (and its Sunni allies) on the one hand, and Iran (and its Shia allies) on the other hand, competing factions appear to be vying for dominance in the US foreign policy establishment. The US administration's relationship with Israel, in particular its stance toward Israeli settlements in the West Bank and the two-state solution, are closely intertwined with this as well. During the reign of the Obama administration there were many signs, both subtle and not so subtle, that the relationship with Saudi Arabia was in the process of being downgraded.**83** It appears as though the opposing foreign policy faction has regained the upper hand under president Trump.

Talks between Washington and Beijing have clearly intensified in recent weeks as well. The trend in China's foreign exchange reserves should reveal whether a truce was agreed upon. We definitely don't want to make the mistake of prematurely declaring the end of the US dollar's dominant role as the senior global reserve currency. As mentioned at the beginning of this section, there are no press conferences or official statements on these issues. All we can do is keep monitoring developments continuously. **As is always the case in such situations, it will be up to historians to one day determine the most important events and turning points in retrospect.**

Since news regarding the issue of de-dollarization are in the meantime coming thick and fast, it is not possible for us to discuss the entire spectrum of information in detail in these pages. We therefore want to provide readers with links to further reading material on the subject. The most interesting and comprehensive comments on the topic can in our opinion be found in the already mentioned newsletter "Forest for the Trees" by Luke Gromen.

Further recommended reading:

China reduces USDs weighting in currency basket
Dubai starts trading of CNY-denominated Shanghai gold futures
China to launch yuan's direct trading with Saudi riyal, UAE dirham
China plans launch of CNY oil futures in H2 2017
Russia, China sign deal to bypass US dollar
Russia Targets China for Gold Sales as VTB, Sberbank Expand
Shanghai signs Dubai as 1st foreign exchange to use its gold fix for futures products
As Yuan Sinks, Goldman Flags Scope for Gold Demand in China
TOCOM Plans Launch of a Physical Market for Gold

83 See: "Germany's Spook Agency vs. Saudi Arabia", www.acting-man.com 05 Dec. 2015. Suddenly, Germany's BND (equivalent to NSA/ CIA) notices how bad these Saudis really are and feels compelled to leak its report to the media "by mistake".

e. Excursus: An Exclusive Interview with Dr. Judy Shelton[84]

Source: www.atlasnetwork.org

Dr. Judy Shelton is an economic advisor to President Donald Trump and the director of the Sound Money Project at the Atlas Network.

She is the author of ***Fixing the Dollar Now: Why US Money Lost Its Integrity and How We Can Restore It***, ***The Coming Soviet Crash***, ***Money Meltdown*** and ***A Guide to Sound Money***. Her international economics articles have been published by the Wall Street Journal, the New York Times, Washington Post, Financial Times, Judy Shelton holds a Ph.D. in business administration from the University of Utah.

Mark Valek:
Good morning Dr. Shelton, thanks for taking the time to talk to us.

"Gold has been money for many thousands of years. Gold is mentioned repeatedly in the Bible. Every civilization and every government in history has treasured gold. Western United States was built on the '49ers quest for gold. It's been said that gold is built into man's DNA. If you can't accept the thesis that gold is the ultimate money, then you're 'out of it' and in denial. And most likely, you will not understand the coming 'big picture."
Richard Russell

The current monetary system is sometimes referred to as US-Dollar Standard or Bretton Woods II. Some central bankers also call it a "*Non-Standard*".
In the past President Trump said some very interesting things about the gold standard. And what we didn't know until recently is that Vice President Mike Pence delivered a fabulous speech where he mentioned the return to sound money, which we found extremely interesting.

How realistic is it in your opinion that there will be some serious considerations about the current global monetary system (the dollar standard) during this administration? Do you think it will be fundamentally questioned?

Dr. Judy Shelton:
I think Donald Trump brought to his candidacy a willingness to look at the relationship between currency movements and trade. And when I was serving on the transition team at the Treasury Department, which is responsible for the exchange rate policy of the US, there really was a great focus on the problem of not actually having any kind of rules.

There are a lot of references to the rules based global trading system and to Bretton Woods, but in fact when it comes to currencies and exchange rates there really are no rules. If you look at the IMF's own website they explain that today it's a "do your own thing" approach. Any country can have any kind of approach they want. They can intervene, like China does daily, they can have floating rates, they can peg or they can have a unified currency (like the Eurozone has).

Ironically, the only thing the IMF says they can't do is to peg their currency to gold, which is almost perverse given its heritage and its raison d'être. I find that more than ironic. I published a piece in the Wall Street Journal called "Trump's Contribution To Sound Money" last year, and the very next day I was asked to join the Trump council of economic advisors by Steven Mnuchin.

84 The Interview was held on April 24, 2017.

And then I was asked to be the international advisor at Treasury for the Trump transition, a member of what they called the landing team. When you ask, "will there be reforms?" I can't comment specifically, but in a recent interview where Steven Mnuchin was speaking with Christine Lagarde he said that the international monetary system is not working for everyone and I think that he has told the IMF that they need to speak candidly about the exchange rate arrangements of member countries.

"The time has come to establish the international monetary system on an unquestionable basis that does not bear the stamp of any country in particular. On what basis? Truly, it is hard to imagine that it could be any other standard than gold. Yes, gold whose nature does not alter, which may be formed equally into ingots, bars or coins; which has no nationality and which has, eternally and universally, been regarded as the unalterable currency par excellence."
Charles de Gaulle

We saw that China was not labeled a currency manipulator, nor was any other country, in the April report that just came out from the Treasury. I think that the criteria used in that report to define manipulation are inadequate. By those criteria, you would potentially label countries like China, Japan, Germany and Switzerland currency manipulators. So that tells you that we don't have a good definition of manipulation. For example, does manipulation mean that a country is deliberately and persistently trying to distort free market outcomes by intervening in forex markets? In the case of China that is the case; they are intervening persistently. But it's to hold their currency up. **It could be that we have been too narrowly focused on using competitive depreciation to gain an export advantage; we should also be focused on the problem of altered capital flows. In short, we should be concerned about the distorting effects of deliberate government intervention to move its currency in either direction.**

Now we see the Fed is talking about raising interest rates. **If the ECB potentially moves toward higher rates in the future, we might see competitive *appreciation* going forward.** It's the capital flows that are most important to an economy, not exports. So perhaps in the interest of trying to attract capital, we will see central banks trying to competitively raise interest rates. That is also a form of manipulation.

What we have seen with Trump is that he is showing a certain sophistication with regards to the dollar. A recent headline story in the Wall Street Journal read: "Trump warns about dangers of a strong dollar". Normally a president wouldn't even comment about the currency, but he said that the only good thing about a strong dollar is the way it sounds. And he is right; no leader wants to call for a "weak" currency.

There is an adjective I would far prefer, one that our treasury secretary has used – which is a "dependable dollar". That is a much better way to describe our currency. It's interesting: President Trump has said that moving to a gold standard would be difficult, but that it would be wonderful, because we would "have a standard on which to base our money". Bravo! **If the next Bretton Woods conference takes place at Mar-a-Lago, I am very happy.**

Ronald Stoeferle:
I think that after the press conference with Shinzo Abe, Trump mentioned that the currencies of the U.S., China and Japan would soon be on "a level playing field".[85]

[85] https://www.bloomberg.com/politics/articles/2017-02-10/trump-vows-level-playing-field-for-u-s-japan-china-currency

But what I am highly interested in is, if a sound dollar policy would be compatible with Trump's plan to reduce the structural trade deficit? **I think it was quite a sensation that he was so vocal about the dollar and he seems to want a weaker dollar to kickstart the re-industrialization.** Do you think there will be another monetary conference like Bretton Woods if we have another financial crisis? And is it possible we get another monetary system that is linked to gold?

Dr. Judy Shelton:
I don't want to suggest that there is anything concrete that will happen, but I think the chances now are better than they were with prior US presidents. The overriding theme in the remarks that President Trump made during his campaign having to do with currency manipulation or about the Federal Reserve creating a false economy relate back to monetary integrity. **One thing that is very clear about Trump's policies is that he would like to re-connect monetary policy to the real economy.**

President Trump believes in real productive economic growth. Not just giving cheap money to already rich investors who proceed to bid up financial markets. He has always said that as a developer he loves zero cost money, but at the same time he has acknowledged that it has been extremely unfair to working people who just have normal bank accounts or who rely on normal pensions. He said, "they are getting creamed". It's been unfair to normal people and it has worsened the income inequality. **We have not seen productive growth or increases in wages or rising standards of living as a result of the zero-cost money.** I think that Trump wants to make things real. He favors people who produce real goods and services. He appreciates manufacturing and skilled labor. Those workers matter greatly to him, and their output makes sense to him. The economy needs to work for them.

I was recently at a conference in Washington and I presented a proposal for a gold-linked Treasury bond. That is strictly my own opinion, but I think a gold-linked bond would be a good thing to think about both domestically and internationally. There was recently a conference in Washington that included video appearances by Paul Volcker, James Baker and Robert Mundell[86] and somebody asked if we need a new Plaza Accord if the dollar continues to strengthen. A strengthening dollar poses a problem for US exporters and the question is if the government would intervene to try to affect the exchange rate. I would rather see an initiative that involves trying to establish a new monetary playing field and I think that would be a longer-term approach, but it could be initiated fairly quickly if they wanted to (not that they actually will, though). I think they could introduce something comparable to TIPS bonds, but you would compensate people over the life of the bond with a stable value in terms of gold. Again, I'm just speaking on my own behalf.

Ronald Stoeferle:
We did have gold linked bonds in the 1970s and it worked pretty well, especially for the French.

86 "A Kemp Forum on Exchange Rates and the Dollar. Should the international monetary system be more stable?", www.jackkempfoundation.org

Dr. Judy Shelton:
I think in the US it was proposed by Alan Greenspan in 1981 and I think he still supports it. I've known him for a long time and we have spoken at some length about it. In the US in the 70s we did once issue a Deutsche Mark denominated bond and there was a currency risk with that; there could be a similar risk with a gold linked bond. But there are also important benefits. If you issue a gold linked bond with a convertibility option, you would have an instrument that linked the value of the dollar to gold. That would be a vitally important signal that the US intended to move towards a stable dollar. It would suggest an inclination to establish new currency arrangements – and would represent a first step toward building a new international monetary system. A stable monetary foundation is more consistent with genuine free trade, in my view. **It doesn't have to be linked to gold, but gold has certain advantages. It is a neutral reserve asset held by more than a hundred countries in their central banks. In that sense, it's nonpolitical.** I personally think it would be an interesting initiative, but I am not suggesting it is something we should expect.

"Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius – and a lot of courage to move on the opposite direction."
Ernst F. Schumacher

When Vice President Mike Pence spoke at the Detroit Economic Club in 2010, he laid out his own pro-growth economic plan which he called ***START***. The S stands for sound money and he even goes so far as to mention an idea floated by Robert Zoellick that we should use gold as a reference point in proposing new international currency arrangements. Unfortunately, that didn't go very far.

Zoellick was criticized for suggesting any role for gold in his Financial Times opinion essay and the idea largely went away. What I brought up at the Washington conference a few days ago was that James Baker as Treasury Secretary in 1987 during the IMF and World Bank meetings also suggested that the US would consider using a commodity basket that included the price of gold as a way to better coordinate international economic policy. The IMF dropped the ball on that; nothing was done. But we have another chance now.

"First, do no harm."
Hippocrates

If the dollar starts to get out of alignment with other currencies (and we know Trump is concerned about that) I think it will be an opening for new initiatives rather than just a bilateral side agreement on currencies and trade negotiations with individual countries. I think we need to develop a prototype for what we would consider as a way to disarm currency manipulation in a trade relationship. And one way might be for both countries to agree to use gold linked sovereign debt securities to track how their own currencies perform relative to a neutral reserve asset.

Mark Valek:
Just out of curiosity, would you accept a position at the Federal Reserve if you were offered one?

Dr. Judy Shelton:
I would be honored, and I am happy even when my name is mentioned, but I think the next one will be Randal Quarles. I think the priority is on the vice chairman for bank supervision. Quarles is a rules-oriented person; he likes the Taylor rule. For me, the best monetary policy rule would involve some kind of reference to gold.

There is also talk about appointing a community banker to the Fed's governing board. I am hoping it would be John Allison who is a gold standard proponent and headed the Cato Institute. From the administration's point of view, Allison has the great advantage of really understanding the importance of giving small business more access to capital through community bank loans. We need to reduce the regulatory burden on community banks so that they can help support entrepreneurial aspirations. If we could get Allison, I think you would have a chance to make a real difference in the Fed's outlook. So I'm hoping for that.

Ronald Stoeferle:
Dr. Shelton, thank you so much for your time!

Dr. Judy Shelton:
Thank you very much, it was my pleasure.

f. The Shadow Gold Price

"Every nation, whether rich or poor, powerful or feeble, can at any hour once again adopt the gold standard."
Ludwig von Mises

Despite having been officially outlawed as money decades ago, gold still remains the primary monetary reserve asset of all major central banks. **Based on our remarks in this report and the 10 preceding reports[87], it should be clear that we believe that gold must be regarded as a monetary asset.**

We first presented the so-called "shadow gold price"[88] calculated by Paul Brodsky and Lee Quaintance in 2011. This way of looking at the gold price is by no means a mere intellectual game. Rather, it is in line with how the exchange rate between paper money and gold was determined according to the Bretton Woods agreement (US monetary base divided by US gold reserves). As Brodsky and Quaintance explain:

> *"The Shadow Gold Price extrapolates forward the Bretton Woods model for valuing US dollars (USD base money/US official gold holdings), used from 1945 to 1973. Rather than fixing the gold/USD exchange rate (at 1/35 of an ounce, which assumed a static quantity of base money), it uses the actual quantity of base money vs. actual gold holdings.*
>
> *A rising SGP implies USD purchasing power dilution in gold terms experienced under the post-Bretton Woods flexible exchange rate system. The widening gap between the SGP and the spot price from 1980 to 2008 reflects the steady creation of USD base money as US and global output expanded. The sudden exponential rise beginning in 2009 reflects extraordinary base money creation through Fed QE."*[89]

To take this concept one step further, we will in the following calculate an **International Shadow Gold Price**. For such purpose, in the first stage of our calculations we will consider the following six major reference currencies

- US Dollar
- Euro
- British Pound Sterling
- Swiss Franc
- Japanese Yen
- Chinese Yuan

"With the gold-standard abandoned, there is no necessity for the Federal Reserve or its controlled Banks to redeem dollars in gold, and so the Fed may expand the supply of paper and bank dollars to its heart´s content."
Murray N. Rothbard

We will first approach a series of prospective shadow gold prices in terms of each of these six currencies, based on their monetary aggregates M0 (Monetary Base), M1, M2 and M3 and their respective gold-backing in terms of each central bank´s gold holdings. Then, we will move on to project an international shadow gold price based on the relative proportions of each of these country´s GDP with respect to the world GDP.

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87 You can download our reports in our archive: https://ingoldwetrust.report/en/archive/
88 See: In Gold we Trust, 2011
89 See: QB Asset Management, Apropos of Everything (2&3), April 2011

Worldwide Gold Stock and Central Bank Gold Holdings

Considering that the total world stock of official gold reserves amounts to 33,259 metric tons, we may deduce that the central banks of the six reference countries currently hold almost 70% of the official world gold reserves. On top of that, 56% of these worldwide official gold holdings lie in the vaults of the US Federal Reserve and the European Central Bank, as depicted in the following table.

	Gold Reserves (metric tons)	% of World Gold Reserves
Dollar	8,133	24.45%
Euro	10,786	32.43%
British Pound	310	0.93%
Swiss Franc	1,040	3.13%
Yen	765	2.30%
Yuan	1,842	5.54%
World	**33,259**	**100.00%**

Source: World Gold Council, Incrementum AG

The Gold-Backing of Monetary Aggregates

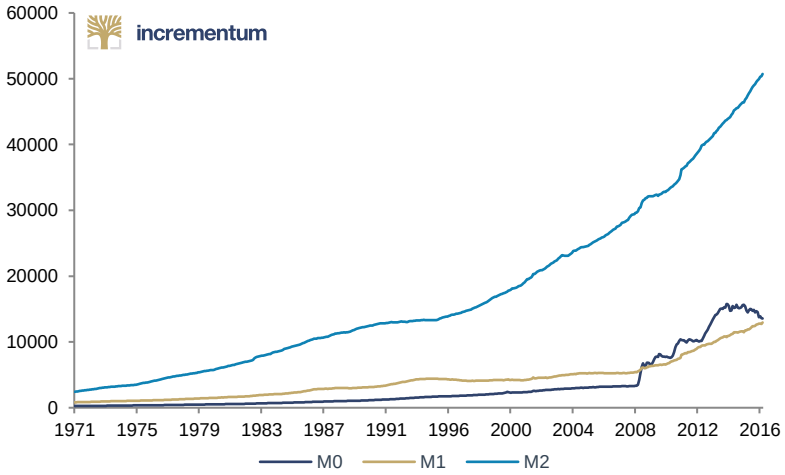
As shown in the following table, we have calculated a series of shadow gold prices, by dividing the stocks of the different monetary aggregates by the amount of gold holdings in their respective central banks. This helps to get a feeling of how many units of each currency are in fact backed by gold.

International Shadow Gold Price (local currency)	Shadow Gold Price M0	Shadow Gold Price M1	Shadow Gold Price M2	Shadow Gold Price M3
US Dollar	13,749	12,987	50,746	58,677
Euro	10,923	20,731	30,817	32,792
British Pound	8,148	162,969	163,466	264,299
Swiss Franc	16,208	17,745	28,217	29,762
Japanese Yen	3,861,364	28,158,519	39,085,684	52,155,305
Yuan	146,182	797,591	2,660,156	3,915,206

Source: OECD, Trading Economics, Incrementum AG

The amounts of such aggregates backed up per troy ounce of gold reserves currently stand at 5-figure levels, as depicted in the following graph.

Monetary Aggregates in USD-Dollars Backed-Up per Troy ounce of Gold (1971-2017):

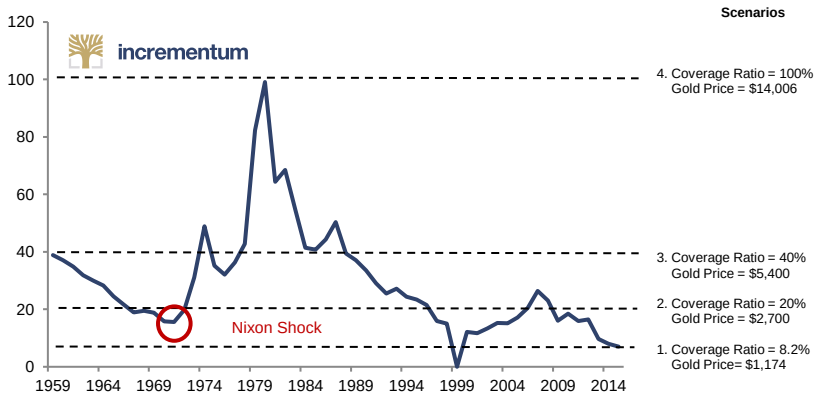


Source: ShadowStats, Federal Reserve St. Louis, Incrementum AG

Such pyramiding on top of actual gold reserves denotes the extent to which gold is undervalued. **We may therefore deduce that over the past decades these aggregates have experienced a significant downtrend in terms of their gold-backing. One could also conclude that gold became significantly cheaper because of this unrestrained monetary inflation.**

As clearly shown in the following graph, the monetary base (M0), as well as M1, M2 and M3 have seen their gold-backing dwindle to levels below 10%, as measured in terms of the US official gold holdings at actual market prices instead of the official valuation of monetized gold at USD 42.22 per troy ounce:

US Monetary Coverage Ratio



Source: BMG Bullion, Federal Reserve St. Louis, Incrementum AG

Following this train of thought, we may also project at which market prices a troy ounce of gold should trade to back up each of such US monetary aggregates in larger proportions, namely 20%, 40% and 100%:

Gold-Backing of US Monetary Aggregates	M0	M1	M2	M3
20%	2,712	2,590	10,144	14,089
40%	5,425	5,180	20,288	28,178
100%	13,563	12,951	50,720	70,447

Source: ShadowStats, Federal Reserve St. Louis, Incrementum AG

The International Shadow Gold Price

Based on the prospective shadow gold prices previously estimated for each of the six currencies, we may now move on to approach an international shadow gold price, based on the relative proportion of each of those six economies on the world GDP. As shown in the following table, in terms of the real gold-backing of worldwide reference fiat currencies, **the market price of gold remains significantly undervalued with respect to the different monetary aggregates of our six reference countries**

International Shadow Gold Price in US Dollars, based on % of World GDP	% of World GDP	M0	M1	M2	M3
US Dollar	24.70%	3,396	3,207	12,534	14,493
Euro	15.93%	1,841	3,494	5,194	5,527
British Pound Sterling	3.52%	360	7,199	7,221	11,676
Swiss Franc	0.88%	141	154	245	259
Japanese Yen	6.29%	2,137	15,586	21,634	28,869
Yuan	15.10%	3,311	18,065	60,252	88,679
		11,186	**47,708**	**107,084**	**149,505**

Source: Statistics Times, OECD, Trading Economics

"As the bond market crashes, central bank balance sheets become insolvent on a mark-to-market basis. To the extent that the only meaningful asset on their balance sheets other than bonds is gold, central banks actually REQUIRE a substantially higher gold price to restore nominal solvency."
Lee Quaintance

Consistently, for the market price of gold (taking USD 1300 ounce as the reference) to actually back up 100% of each monetary aggregate expressed in US Dollars as worldwide reserve fiat currency, it would have to rise around 9-fold (760%) in terms of M0 (monetary base), over 36-fold (3569%) in terms of M1, almost 83-fold (8137%) in terms of M2, and 115-fold (11400%) in terms of M3:

Gold-Backing of GDP-Weighted Reference Fiat Currencies in terms of USD	M0	M1	M2	M3
20%	2,237	9,541	21,416	29,901
40%	4,474	19,083	42,833	59,802
100%	11,186	47,708	107,084	149,505

Source: ShadowStats, Federal Reserve St. Louis, Incrementum AG

Hypothetically, to back up 40% of such monetary supply in terms of different aggregates, the market price of gold should go up 244% in terms of M0, 1368% in terms of M1, 3194% in terms of M2, and 4500% in terms of M3. In order to back up 20% of these monetary aggregates as denominated in US Dollars, the market price of gold should go up 72% in terms of M0, 634% in terms of M1, 1547% in terms of M2, and 2200% in terms of M3.

Conclusion

"The return to gold does not depend on the fulfillment of some material condition. It is an ideological problem. It presupposes only one thing: the abandonment of the illusion that increasing the quantity of money creates prosperity."
Ludwig von Mises

We want to conclude this chapter with a brilliant statement by our dear friend John Butler, Head of Wealth Services at GoldMoney, from his highly-recommended book "The Golden Revolution – Revisited":

"Some readers might express disbelief at the prospect of a gold price of $20,000 on any relevant time-frame. I would advise these readers rather to express their disbelief at how the Federal Reserve has grown the money supply by such a colossal amount since president Nixon closed the gold window in 1971. All that we have done here is to run the numbers as they are.

The alternative to revaluing gold to the levels discussed here is to force an outright contraction of the US broad or possibly even narrow money supply, which would wreak havoc with the banking system and economy, exactly the opposite of what is needed to restore a degree of monetary stability not only to the US but also to the global economy"[90]

90 "The Golden Revolution, Revisited", John Butler, Goldmoney Wealth Research, https://wealth.goldmoney.com/research/goldmoney-insights/john-butler/popular/2017-the-golden-revolution-revisited

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The Age of Capital Consumption

Key Takeaways

- The term capital is often used synonymous to money. However, it is very distinct from money, it is a largely irreversible, definite structure, composed of heterogeneous elements such as goods, knowledge, context, human beings, talents and experience.
- The burden on productive, self-sustaining, parts of the economy has grown so large that there is only very little room to grow the economy.
- Perpetuating global imbalances through credit led "growth" will only consume more capital and cement unsustainable economic activities which concomitantly lead to further capital consumption, falling living standards, sclerosis and ultimately political and social upheaval.

"Capital consumption expresses itself in a lack of reserves, too large profit distributions, bonuses and incentives, exaggerated risk-taking amid declining liquidity, a decreasing propensity to save, wastefulness, a throw-away and entitlement mentality…"

Rahim Taghizadegan

a. Brief Introduction to the Austrian Capital Theory

"Thus, it is the aim of good government to stimulate production, of bad government to encourage consumption."
Jean-Baptiste Say

When capital is mentioned in the present-day political debate, the term is usually subject to a rather one-dimensional interpretation: Whether capital saved by citizens, the question of capital reserves held by pension funds, the start-up capital of young entrepreneurs or capital gains taxes on investments are discussed – in all these cases capital is equivalent to "money". Yet capital is distinct from money, it is a largely irreversible, definite structure, composed of heterogeneous elements such as goods, knowledge, context, human beings, talents and experience.[91] Money is "only" the simplifying aid that enables us to record the incredibly complex heterogeneous capital structure in a uniform manner. It serves as a basis for assessing the value of these diverse forms of capital.

Capital is a largely irreversible structure encompassing a variety of elements, including goods, knowledge, context, human beings, talents and experience.

Modern economics textbooks usually refer to capital with the letter "C". This conceptual approach blurs the important fact, that capital is not merely a single magnitude, an economic variable representing a magically self-replicating homogenous blob but a heterogeneous structure. **Among the various economic schools of thought it is first and foremost the Austrian School of Economics, which stresses the heterogeneity of capital**. Furthermore, Austrians have correctly recognized, that capital does not automatically grow or perpetuate itself. Capital must be actively created and maintained, through production, saving and sensible investment.

Consumer goods are goods of the first order, while capital goods are goods of higher order.

Moreover, Austrians emphasize that one has to differentiate between two types of goods in the production process: consumer goods and capital goods. *Consumer goods* are used in immediate consumption – such as food. Consumer goods are a means to achieve an end directly. Thus, food helps to directly achieve the end of satisfying the basic need for nutrition. *Capital goods* differ from consumer goods in that they are way-stations toward the production of consumer goods which can be used to achieve ultimate ends. Capital goods therefore are means to achieve ends indirectly. An oven is a capital good, which enables the baker to produce the consumer good bread.

The differentiation between these classes of goods is attributable to Carl Menger.[92] The founder of the Austrian School of Economics moreover assigned a ranking to consumer and capital goods. He referred to consumer goods as goods of the first order and capital goods as goods of higher order. **The more capital intensive an economy is, the more stages of production exist**; iron (5th order good) is transformed into steel (4th order good), steel into sheet steel (3rd order good), sheet steel into the oven (2nd order good) and finally with the help of the oven the bread (1st order good, consumer good) is baked.

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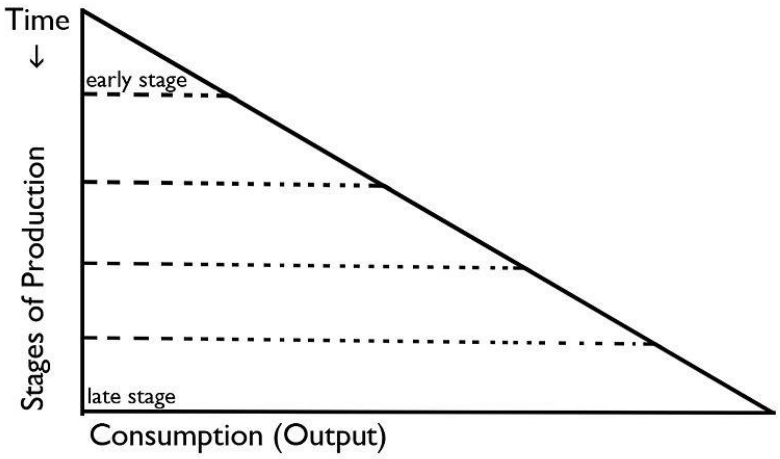
[91] Taghizadegan, Rahim: Alles, was Sie über die Österreichische Schule der Nationalökonomie wissen müssen: Einführung in die Austrian Economics (All you need to know about the Austrian School of Economics: An Introduction) *Finanzbuch-Verlag*. Page 77
[92] Taghizadegan, Rahim: Alles, was Sie über die Österreichische Schule der Nationalökonomie wissen müssen: Einführung in die Austrian Economics (All you need to know about the Austrian School of Economics: An Introduction) *Finanzbuch-Verlag*. Page 62

Hayekian Triangle



Source: Mises Wiki

Every deepening of the production structure involves taking detours. This is referred to as the greater productiveness of roundabout production methods.

Through capital formation one creates the potential means to boost productivity. The logical precondition for this is that the production of consumer goods must be temporarily decreased or even stopped, as scarce resources are redeployed toward the production of capital goods. If current production processes generate only fewer or no consumer goods, it follows that consumption will have to be reduced by the quantity of consumer goods no longer produced. Every deepening of the production structure therefore involves taking detours. Eugen von Boehm-Bawerk, a student of Carl Menger and another important pioneer of the Austrian School, referred to this phenomenon as the greater productiveness of roundabout methods of production.

"If you want a guarantee, buy a toaster."
Clint Eastwood

Capital formation is therefore always an attempt to generate larger returns in the long term by adopting more roundabout methods of production. Such higher returns are by no means guaranteed though, as the roundabout methods chosen may turn out to be misguided. In the best case only those roundabout methods will ultimately be continued, which do result in greater productivity. It is therefore fair to assume that a more capital-intensive production structure will generate more output than a less capital-intensive one.[93] The more prosperous an economic region, the more capital-intensive its production structure is. **The fact that the generations currently living in our society are able to enjoy such a high standard of living is the result of decades or even centuries of both cultural and economic capital accumulation by our forebears**.

Today's Western societies rest on a foundation of an enormous stock of capital – both of the economic and the cultural kind.

Once a stock of capital has been accumulated, it is not destined to be eternal. Capital is thoroughly transitory, it wears out, it is used up in the production process, or becomes entirely obsolete. Existing capital requires regularly recurring reinvestment, which can usually be funded directly out of the

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[93] Taghizadegan Rahim, Stöferle Ronald, Valek Mark, Blasnik Heinz: Austrian School for Investors: Austrian Investing between Inflation and Deflation. Mises.at/Scholarium. Page 117

return capital generates. If reinvestment is neglected because the entire output or more is consumed, the result is capital consumption.[94]

b. The Age of Capital Consumption

"Early in a credit expansion income earners consume more than they otherwise would have, while later, they are forced to consume less than they could have."
Roger Garrison

It is not only the dwindling understanding of the nature of capital that leads us to consume it without being aware of it. It is also the framework of the real economy which unwittingly drives us to do so. In 1971 money was finally cut loose entirely from the gold anchor and we entered the "paper money era". In retrospect, it has to be stated that cutting the last tie to gold was a fatal mistake. Among other things, it has triggered unprecedented instability in interest rates. While interest rates displayed relatively little volatility as long as money was still tied to gold, they surged dramatically after 1971, reaching a peak of approximately 16 percent in 1981 (10-year treasury yield), before beginning a nosedive that continues until today. This massive decline in interest rates over the past 35 years has gradually eroded the capital stock.

An immediately obvious effect is the decline in so-called "yield purchasing power". The concept describes what the income from savings, or more precisely the interest return on savings, will purchase in terms of goods. The opportunity to generate interest income from savings has of course decreased quite drastically. Once zero or even negative interest rate territory is reached, the return on saved capital is obviously no longer large enough to enable one to live from it, let alone finance a reasonable standard of living. Consequently, saved capital has to be consumed in order to secure one's survival. **Capital consumption is glaringly obvious in this case**.[95]

It is not only the small savers who have to struggle with the current detrimental interest rates, the institutional pension schemes and the institutional investors also face severe problems. They never expected the interest rates to get so low. As a consequence assets have to be liquidated and thus less and less real savings are channelled into the productive sectors of the economy. **Such capital consumption should over time lead to economic downturn and decreasing real wages**. Empirical data seems to confirm our thesis of a prolonged capital consumption in the Western world.

At first, let's have a look at economic growth, as measured by a rolling ten year CAGR (Compound Annual Growth Rate) of real gross domestic product. The chart below indicates that it never has been weaker in the western world. True, US growth briefly fell below today's level during the Great Depression, but we have never, in peace time, witnessed such persistent sluggishness.

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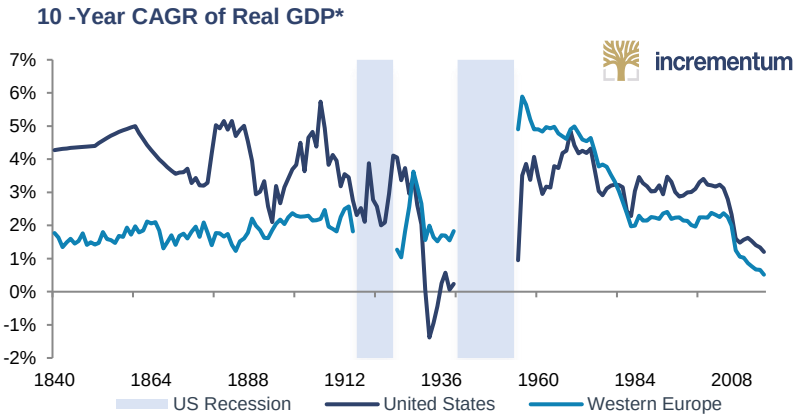
94 Taghizadegan, Rahim: Alles, was Sie über die Österreichische Schule der Nationalökonomie wissen müssen: Einführung in die Austrian Economics (All you need to know about the Austrian School of Economics: An Introduction) *Finanzbuch-Verlag*. Page 98.
95 Weiner, Keith: Yield Purchasing Power: https://keithweinereconomics.com/2017/01/07/yield-purchasing-power/

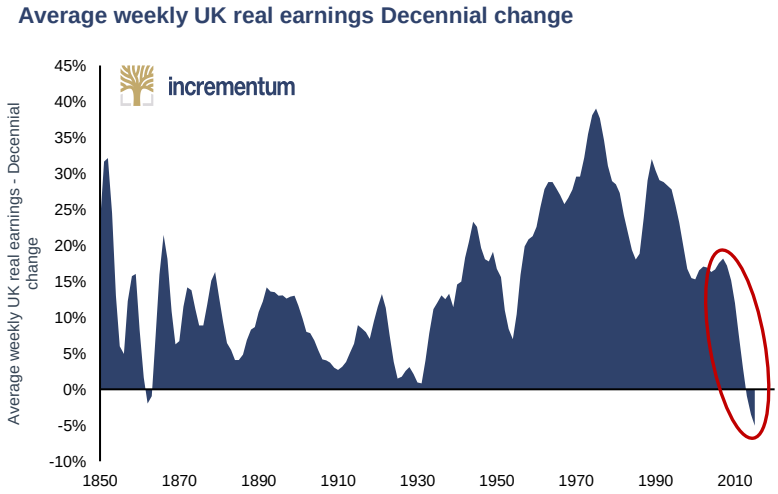


Source: Maddison Project, IMF, HFH
*Time series interrupted by World War I and World War II

Some may say that shaving off a percentage point from real growth shouldn't be a major cause for alarm. However, compounding effects from persistent low growth become quite dramatic as time goes by. If we, for the sake of argument, assume US growth followed its pre-crisis trend trajectory the US economy would be more than 11 percent higher today that it actually is, amounting to almost 16 thousand dollars in extra income per household.

Technological progress as well as the opening up of new markets have masked capital consumption in the Western world

The next graph shows that the decennial change in real weekly earnings for the UK has never been as dismal. Hollowing out the investable capital pool through resource misallocation (by consciously undermining market mechanisms) has decimated productivity gains and by extension real wages.



Source: Bank of England, IMF, HFH

It is beyond question that massive capital consumption is taking place nowadays, yet not all people are affected by it to the same extent. On the one hand, the policy of artificially reducing the interest as orchestrated by the central banks does negatively influence the entrepreneurs' tasks. Investments, especially capital-intensive investments seem to be more profitable as compared to a realistic, i. e. non-interventionist level, profits are thus higher and reserves lower. These and other inflation-induced errors promote capital consumption.

On the other hand, counteracting capital consumption are technological progress and the rapid expansion of our areas of economic activity into Eastern Europe and Asia in recent decades, due to the collapse of communism and the fact that many countries belatedly caught up with the monetary and industrial revolution in its wake. Without this catching-up process it would have been necessary to restrict consumption in Western countries a long time ago already.[96]

c. Productive, unproductive and counter-productive debt

"You cannot escape the responsibility of tomorrow by evading it today."
Abraham Lincoln

Another confirmation of our thesis that the Western world is suffering from capital consumption can be derived from dividing debt into three categories, a) productive debt, b) unproductive debt and c) counter-productive debt:

- **Productive debt** is debt used to fund expansion in production of goods or services, or alternatively, debt used to make subsequent sales. Obviously not all business loans turn out profitable, but the *intent* is one of advancement of society's productive capabilities. Such debt is self-liquidating in the sense that it will generate income to repay both principal and interest without help of external sources. Productive debt can be both direct (loan to fund inventories, new machinery etc.) or indirect (for R&D or some form of student loans). In this category, all business loans and about 35% of student loans are included.

- **Unproductive debt** is debt used to fund durable consumer goods such as houses and automobiles. These big-ticket items provide a service to the debtor, but the item itself does not generate income. The mortgage debt must be repaid by the debtor without any cash-flow derived from the house (unless it is used as a rental unit, but then it will come under business loans). This debt is thus not self-liquidating and it does not generate added income to the debtor. Unproductive debt pulls resources out of society today under the promise to repay with future production from the debtor.

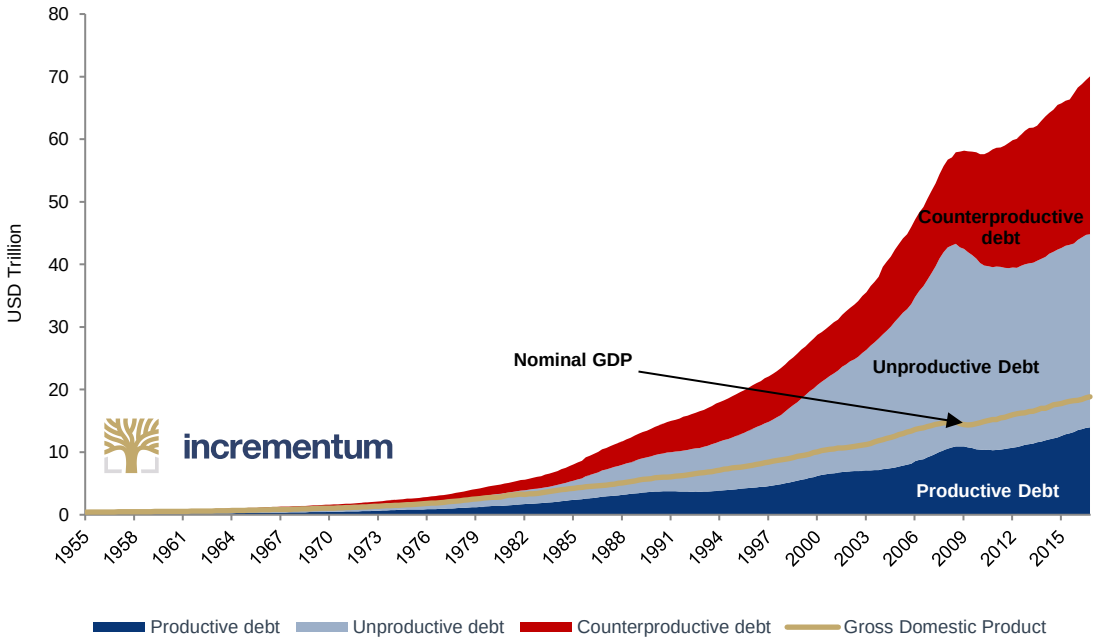
- **Counterproductive (destructive) debt** is debt used to fund current consumption without any regard for future production. It is counterproductive because such debt deprives productive parts of society from access to valuable resources which could alternatively be used to create more output at a later stage. Needless to say, counterproductive debt is not self-liquidating, but is fully dependent on the debtor's ability to generate income. Channel too much debt into counterproductive measures and future productivity and *real* wages will grow slower or even fall compared to historical norms. This category includes government debt (mostly used for redistribution and consumption) and consumer credit.

96 Taghizadegan Rahim, Stöferle Ronald, Valek Mark, Blasnik Heinz: Austrian School for Investors: Austrian Investing between Inflation and Deflation. Mises.at/Scholarium, page 42.

"Either the State ends public debt, or public debt will end the State."
David Hume

In *Financial Accounts of the United States* (formerly Flow of Funds) data can be derived to create approximations of the debt categories presented above. The following chart depicts the development since 1955. Throughout the 1950s, 60s and 70s productive debt to GDP averaged just over 40%. Today that ratio has risen to almost 75%. This needs not be a problem though. As stated above, such debts tend to self-liquidate and not put strain on other parts of the economy. Unproductive debt as a share of GDP averaged somewhat higher, at 49%, between 1950 and 1980, but has since exploded to reach a level of 220% by 2009 before falling down to a still elevated level of 165%. However, the liquidation of unproductive debt in the aftermath of the financial crisis was more than offset by increases in counterproductive debt levels which are today at a record high of more than 130%.

US Debt, by category, vs. GDP (USD trn.)



Source: Federal Reserve St. Louis, Bureau of Economic Analysis, HFH

"Gold is the money of kings, silver is the money of gentlemen, barter is the money of peasant – but debt is the money of slaves."
Franz Norm

To make a long story short, exploding debt levels since the end of Bretton-Woods led not only to higher debt to GDP ratios, it led to far more of the wrong kind of debt. Resource allocation became unsustainable as the western world started to consume their seed corn by essentially mortgaging first, their productive assets, and then their life's assets, just to sustain high levels of current consumption. The end result is masses of indentured debt serfs with no plausible prospects of ever repaying their debts.

"As we look back throughout history, it quickly becomes obvious that Christopher Columbus was the world's first modern central banker. He left without knowing where he was going, when he arrived he did not know where he was, and he did it all with other people's money."
Charles Gave

The main reason for this development is that central banks severed their direct and indirect tie to gold; by doing so they suddenly were able to act more flexibly whenever recessions (resource *re*-allocations) occurred. In other words, when unproductive debt reaches a stage where it diverts too many resources away from the productive part of society, a market rebalancing will inevitably occur as unproductive economic activity cannot, by definition, be organically funded from the real pool of resources. The only way to forcefully stop resource *re*-allocation in a recession is through the very visible hand of government, either indirectly through money printing (a transaction of nothing for something) or through fiscal policy.

The aftermath of the 2007/09 meltdown is a perfect example. Unproductive debt was piling up on the US balance sheet as struggling consumers maintained a rising standard of living through consumer debt and mortgages in lack of proper income growth. When the crash came, the state bailed out unproductive debt by bringing it on the public balance sheet, consequently leading to economic stagnation. **Federal Reserve policy of ZIRP and QE just made a bad situation worse**.

Perpetuating global imbalances through credit led "growth" will only consume more capital and cement unsustainable economic activities which concomitantly lead to further capital consumption, falling living standards, sclerosis and ultimately political and social upheaval.

d. Conclusion

"It may sometimes be expedient for a man to heat the stove with his furniture. But he should not delude himself by believing that he has discovered a wonderful new method of heating his premises."
Ludwig von Mises

The burden on productive, self-sustaining, parts of the economy has grown so large that there is only very little room to grow the economy. The obvious solution is clearly to raise interest rates and stop the flow of additional money, but this would cut funding to unproductive/counterproductive parts of the economy and lead to another great recession.
While the recession would re-allocate resources to more sustainable activities and set the foundation for organic growth and prosperity, it is at odds with both the agenda of myopic politicians eager to avoid short-term pain and monetary policymakers enmeshed in the web of Keynesian voodoo-economics.

"The more successful you are at avoiding creative destruction, the more pent-up destruction you have in store."
Bill Bonner

The solution will therefore be to "prime the pump" at the slightest hint of an upcoming recession. So far, this policy has been deflationary as it creates excess capacity and brings future demand into the present, however, at some point it will lead to reduced demand for cash with cash-holders losing confidence in the currency they hold. **The transition from deflation to inflation will certainly *feel* like a proper recovery, but it will turn out to be the final dead cat bounce just prior to a new, stagflationary cycle.**

The all-encompassing redistributive welfare state, which either directly through taxes or indirectly through the monetary system continually shifts and reallocates large amounts of capital, manages to paper over the effects of capital consumption to some extent. **It remains to be seen how much longer this can continue. Once the stock of capital is depleted, the awakening will be rude. We**

are certain, that gold is an essential part of any portfolio in this stage of the economic cycle.

e. Addendum: The Money Supply to Saving Ratio & Gold

Savings promote economic stability...

In the preceding chapters, we already elaborated on the structure of capital. Highly relevant to the soundness of the capital structure is the source for funding capital projects: savings. Frequently ignored these days is the principle that an adequate amount of savings also helps promote economic stability. Since money is created as debt, changes in the money supply relative to saving can serve as an indicator of the degree of economic risk present in an economy.

...while monetary expansion fuels economic instability.

Enter the *money supply to saving ratio (MS/S ratio)*, a ratio based on an insight by Friedrich August von Hayek. As is well-known among a minority of economists, the economic costs of monetary inflation are wide-ranging and include relative declines in the rate of saving, price distortions, overconsumption and malinvestments. It's therefore most warranted that Hayek once wrote[97] that

> *...saving at a continuously high rate is an important safeguard of stability*

and that a high rate of saving would also

> *...tend to mitigate disturbances arising from fluctuations in credit.* [98]

A higher MS/S-ratio indicates increased risks of an economic setback.

Hayek here basically points out what once used to be viewed as common sense even in the field of economics; namely, that saving is a good thing (a "safeguard of stability") while monetary inflation is the opposite (as it creates "disturbances"). The relation between the two is therefore of utmost importance.

Generally speaking, the higher the MS/S ratio, the potentially greater the economic distortions and the higher the risk of boom & bust cycles. If accumulated savings are at insufficient levels in an inflationary environment, both consumers and producers will sooner or later discover that they have not set aside enough money to sustain their current spending and necessary investment levels. This becomes evident when new credit becomes difficult to come by or whenever the costs of that credit rise. Both spending and investment must then fall as a result. Deflationary pressures set in and the economic distortions are revealed in the form of a correction and a GDP recession.

As for the denominator in the ratio (saving), people and businesses will increase the proportion of income saved when uncertainty increases. This may take place in tandem with, or even be induced by, a declining money supply growth rate. What

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97 See "Profits, Interest, and Investment", F.A. Hayek, p. 168
98 See „The Austrian Theory Of the Business Cycle – A Short Synthesis", Atle Willems, Seeking Alpha.com

is important to note however is saving preferences, especially increases, can change substantially quicker and more violently than the money supply.

Economic distortions are suddenly revealed when the ratio drops

The drop in the ratio is therefore brought about by a decrease in money supply growth relative to saving or, alternatively, an increase in saving relative to the money supply. The drop will necessarily reveal the economic distortions brought about by the previous rise in the ratio. Together with the increased uncertainty that follows, these reactions might induce a flight to cash and safe haven assets, a reaction which likely benefits the price of gold. **This is especially true when the two factors combined provoke an economic crisis.**

Gold benefits from monetary inflation...

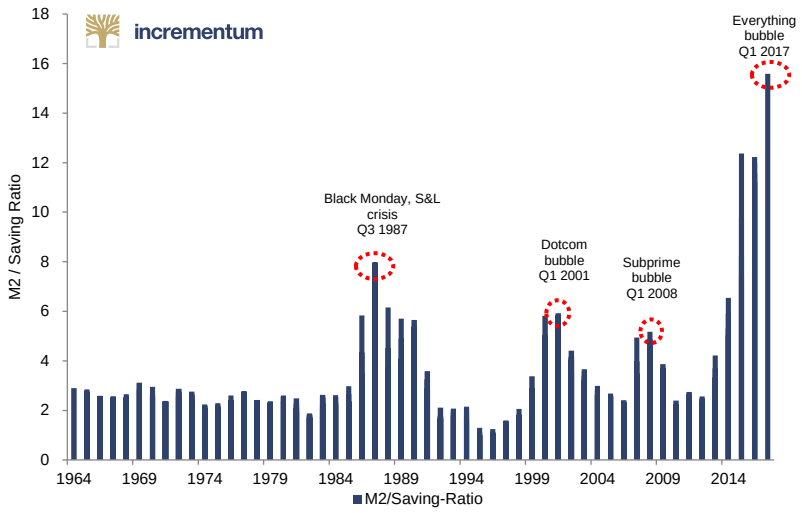
That the quantity of money usually grows substantially faster than the quantity of gold is a primary reason why gold is superior as a permanent store of value. In the current low or negative real interest rate environment, this is even truer today. As a general rule, the price of gold benefits from monetary inflation as would many financial- and real assets and commodities that also expand at a slower pace than the money supply.

.... but this benefit can be delayed when risk-aversion declines.

An exception to the general rule mentioned above is during times of exuberance when investors become substantially less risk-averse and increasingly pursue quick gains. The 1990s is a case in point, a decade during which the quantity of money doubled, the S&P 500 index surged 310% (15.1% p.a.), while the price of gold plummeted 31%. Gold might at times therefore underperform relative to increases in the MS/S ratio, especially during the mid- to final stages of the upward swing of the ratio when speculation in other assets thrives. But as the ratio peaks and the likelihood of a correction increases. **At this point, gold is primed to show its true colours as a safe haven asset and appreciate in both absolute and relative terms.**

The chart below reveals how peaks in the MS/S ratio for the U.S. economy regularly are associated with the end of inflationary booms and the onset of financial crises.

M2 Money Supply to Saving Ratio for the US[99]



Source: US Bureau of Economic Analysis, Federal Reserve St. Louis, Atle Willems, Incrementum AG

A peaking MS/S ratio has been an important economic risk gauge in the past and one that benefits gold as a safe haven asset!

And gold did indeed prove its true colours in the aftermath of previous peaks in the MS/S ratio, most notably following the 2001 and 2008 peaks. The table below depicts the annualised price changes in gold and stocks (Russell 3000) for six different time periods following the 2001 and 2008 peaks in the ratio.

The table shows that gold appreciated 13.6% on an annualised basis during the 18-month period following the Q1 2001 peak in the MS/S ratio while stocks declined 16.8% on the same basis. Gold hence outperformed stocks by 30.4 percentage points (annualised) over this period. Overall, gold appreciated considerably over 18-month intervals following peaks in the ratio and decisively outperformed stocks on all occasions but one; the six-month period following the 2008 peak.

Annualised returns following peak MS/Saving Ratio	Gold	Stocks	% point difference
Q1 2001			
6 months	15.12%	-19.59%	34.71%
1 year	11.81%	-0.24%	12.05%
18 months	13.61%	-16.76%	30.37%
2 year	13.90%	-13.58%	27.48%
3 year	15.53%	1.04%	14.49%
5 year	16.18%	4.73%	11.45%
Average	14.36%	-7.40%	21.76%
Q1 2008			
6 months	-27.83%	-10.93%	-16.91%
1 year	-4.64%	-41.17%	36.53%
18 months	1.74%	-11.44%	13.17%
2 year	7.18%	-3.39%	10.57%
3 year	13.58%	2.92%	10.66%
5 year	10.38%	6.16%	4.22%
Average	**0.07%**	**-9.64%**	**9.71%**

Sources: ICE Benchmark Administration, Federal Reserve St. Louis, Atle Willems, Incrementum AG

99 Calculated as the four quarters average of 5-year change in the M2 Money Supply divided by the 5-year change in Gross Private Saving.

Though the ratio has just reached an extravagant new high, timing peaks in the ratio is more art than science. But in general, the higher the MS/S ratio and the longer it remains elevated, the greater the probability of an economic reaction and hence the greater the chances gold, with its safe haven properties, will appreciate.
It could therefore prove to be a wise move to increase the allocation to gold proportionally with increases in the ratio for two primary reasons:

1) gold benefits from the inflation created during the entire upward swing of the MS/S ratio and
2) gold benefits from the uncertainty and even panic that sets in when the ratio eventually drops.

Based on the above observations and the theory underpinning the MS/S ratio, it would not be unreasonable to be prepared for future declines in the ratio and another financial crisis. **As the ratio just hit an extravagant new high in Q1 2017, it also would not be unreasonable to expect gold to once again soon show its true colours as a safe have asset.**

The Disastrous Dynamics of Debt Based Money

Key Takeaways

- The current monetary system is designed in such a way, that the equation “money = debt” applies to it. Expanding the money supply means to increase the nominal amount of debt in the system.
- Hyman Minsky differentiated between three classes of debtors, of which the most adventurous are the so-called “Ponzi debtors”. As soon as borrowers of this class begin to proliferate, the reversal and collapse of the inflationary credit expansion threatens.
- Demand deposits ultimately represent mere *claims to money* and are therefore exposed to default risk. The new “bail-in” regulations affirm this fact.

"Stability leads to instability. The more stable things become and the longer things are stable, the more unstable they will be when the crisis hits."

Hyman Minsky

Debt, debt restructuring, over-indebtedness – this semantic field is an integral fixture of modern-day economic news. Most of the time, the news is brimming with reports on the financial difficulties faced by nations and large corporations. Particularly in Anglo-Saxon countries, credit card debts and the sprawling mortgage debt of private households are regularly recurring topics as well. One can't help thinking that the accumulation of debt and bankruptcy declarations are major features of everyday life these days.

In many cases, financial problems can undoubtedly be attributed to individual misconduct: political irresponsibility, economic megalomania and compulsive consumerism. However, an additional, institutional factor is almost entirely missing from public debate of the debt problem: **namely the fact that today's monetary system is a debt money system.**

If no-one were to go into debt anymore, the vast bulk of the money supply would eventually disappear – with catastrophic effects on the economy. In the following, we will take a closer look at this unique feature of the modern-day monetary system.

a. The Debt Dynamics of the Current Monetary System

In our *2015 In Gold We Trust*[100] report we have pointed out that the current monetary system is driven by its inherent debt dynamics. **The term inherent debt dynamics is meant to convey that the money supply is nowadays essentially a reflection of – interest bearing – debt**. In the current status quo, the money supply rises only if additional credit is extended on a net basis. If a loan is paid back, the money supply declines commensurately.[101]

"This different method of obtaining money is the creation of purchasing power by banks. [...] it is always a question, not of transforming purchasing power which already exists in someone's possession, but of the creation of new purchasing power out of nothing."
Joseph A. Schumpeter

The vast majority of this debt money in our two-stage money creation system consists of circulation credit (uncovered money substitutes or *fiduciary media*) created by commercial banks. This type of money is generally referred to as deposit money. The degree of potential leverage provided by central bank credit (a.k.a. high-powered money), i.e.. how many units of deposit money commercial banks are able to create on the basis of every unit of reserves deposited with the central bank, depends on the so-called money multiplier (i.e., the reverse of the required minimum reserve ratio). The larger the multiplier, the more pronounced the potential extent of leverage commercial banks can add on the basis of central bank money.[102]

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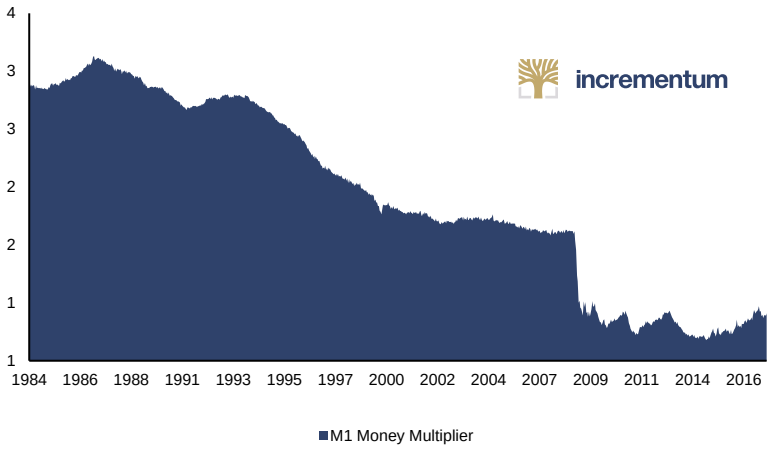
[100] https://ingoldwetrust.report/media/c1/c8/24/c7/in-gold-we-trust-2015-extended-version-e.pdf
[101] Exceptions to this rule are direct deposit money creation by means of central bank debt monetization (which requires active maintenance once implemented, as the money supply otherwise shrinks again when bonds held by the central bank are redeemed), and the transformation of excess bank reserves on deposit with the central bank into cash currency (banknotes and coins).
[102] It is important to understand this principle, but it should be noted that due certain accounting tricks, such as e.g. the overnight sweeping of deposit money into so-called "money market deposit accounts", reserve requirements have in actual practice ceased to play a role in the extent of credit creation a long time ago. In reality, there was nigh unlimited credit expansion regardless of the level of reserves prior to the GFC. In the post-GFC world, a stricter capital ratio requirements have imposed a limit on credit creation by commercial banks. These are however distinct from the traditional reserve ratio.

US M1 money multiplier



Source: Federal Reserve St. Louis, Incrementum AG

Infobox: velocity of money vs. demand for money

Austrian School economists reject the quantity equation M*V = P*Q for fundamental reasons. (M= quantity of money, V= velocity of circulation, P= price level, Q= number of transactions – while the equation is a mathematical truism, it is conceptually fallacious).

Aggregates such as *P* are masking the individual choices that are relevant in economic action and fail to take into account that value judgments are subjective (i.e., exchanges do not take place because buyers and sellers place an equal value on the things they exchange, but rather because they value them differently). Moreover, money never "circulates" - it is always in someone's possession.

It is therefore not the fudge factor "velocity" that decisively affects the purchasing power of money, but rather the *demand for money*, or more precisely, the demand to temporarily hold larger cash balances. The greater the demand for money, the greater the purchasing power of a given stock of money.

The chart above vividly illustrates the decline in the money multiplier after the insolvency of Lehman Brothers in September 2008 and its failure to recover since then. The pace of actual credit expansion by commercial banks remains well below its potential pace from a monetary policy and regulatory perspective.[103]

The supply of money and credit increases when loans are funded from demand deposits. Moreover, commercial banks receive newly created central bank credit both through conventional and non-convential monetary policy operations, by delivering securities eligible for refinancing to the central bank (either in repos, or permanent coupon pass type securities sales). Nowadays excess reserves created as part of non-conventional asset purchase programs ("QE") generally attract interest, but these rates can take the form of negative penalty rates as well.

Generally, it can be stated that in the modern-day monetary system, money = credit. Generally, the money supply is only expanded if someone wants to take on additional debt. A direct consequence of this is that an increase in financial asset values in society is accompanied by a commensurate increase in liabilities.

One of the main goals of monetary policy is to maintain the domestic "price stability" of money. In practice, this is an obligation to actually devalue

[103] Partly this is by design. "QE" has greatly expanded the part of the money supply consisting of covered money substitutes. By paying interest on reserves, the central bank can keep control of the level of short term rates as well as indirectly over the pace of credit creation by private banks despite the vast growth in excess reserves. Credit expansion by means of lending to the private sector is also capped by new capital requirements (Basel III), which give preference to government debt.

the purchasing power of money by around 2% per year.[104] If this goal is to be pursued successfully, there are many factors that force one to continually inflate the supply of money and credit.

For one thing, prices are under perennial pressure from the goods side in a progressing economy, as production becomes more productive. Under the gold standard, it could be observed empirically that prices declined roughly by the difference between productivity growth and the growth in the supply of gold. Real economic growth was both much higher and far more equitable at the time than it is today, but the gold standard also forced governments to remain small and disciplined, which explains why it was willfully sabotaged.

Other factors are running counter to this permanent devaluation policy (a.k.a. "price stability") by increasing the demand for money. Among these are population growth, the inclusion of additional sectors of the population in the monetary economy (e.g. rising employment of women) and the broadening of the range of goods and services available to consumers, all of which would lead to declining prices in the absence of money supply expansion.

If the monetary system is to continue to function in this manner, in particular if price deflation is to be avoided, an inescapable consequence is that new borrowers need to be found all the time, and/or existing borrowers must increase their indebtedness in order to bring the desired money supply expansion actually about. It follows further that any debt reduction by one economic actor must be more than offset by other actors expanding their debt burden. **The notion that governments can inflate their debt away with the help of the printing press is currently only applicable to a limited extent in this framework. It can only be done of other actors in the economy begin to increase their indebtedness.**

As an example, consider the developments in Sweden in the first decade of the new millennium. Government debt decreased from 77% to 58% of GDP in that period, which was widely praised as commendable, particularly by so-called neoliberal economists. What is as a rule rarely mentioned, or remains veiled under the heading overheated housing market, is that there was concurrently a strong increase in the indebtedness of households, namely by 36 percentage points to 87% of GDP.

b. The Limits of Debt Accumulation

Hyman Minsky differentiated between three types of borrowers, whose preponderance at any given time he believed to be a good indicator for the stage of the business cycle the economy was in:[105]

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[104] A gold standard safeguards the external purchasing power of money in terms of its exchange rate: under the global gold standard, exchange rates were in fact fixed. A gold standard imposes discipline on economic policy in many respects, which is precisely why governments decided to sabotage it.

[105] Hyman P. Minsky: „The Financial Instability Hypothesis." The Jerome Levy Economics Institute of Bard College, Working Paper No. 74, May 1992

- **Hedge borrowers:** debtors who can meet all their debt obligations from cash flows and regularly service and repay their loans

- **Speculative borrowers:** these debtors can pay interest out of their cash flows, but are unable to meet redemptions of principal and hence speculate they will be able to extend their loans or issue new debt in good time.

- **An unmistakable sign that a stock market crash is bound to happen seen is the proliferation of so-called "Ponzi borrowers"**, who aren't even able to meet interest payments on their debt without issuing more debt. These Ponzi debtors are speculating on the expectation that the asset they have provided as collateral will steadily increase in price. In an inflationary environment, that is usually the case. One only needs to remember the appearance of foreign currency-denominated (usually CHF or JPY) bullet loans collateralized with dubious repayment vehicles in Europe. This house of cards implodes as soon as the asset bubble bursts and Ponzi borrowers are the first to become insolvent. **This event is referred to as a "Minsky moment".**

"The world's most influential economic mentor is neither Keynes nor Hayek, but Charles Ponzi."
Tim Morgan

The duration and intensity of the preceding credit inflation determines the severity of the stabilization recession. The latter is characterized by symptoms such as strong declines in stock prices, corporate bankruptcies, rising unemployment and in extreme cases even government insolvencies. As a rule, the sectors that were the greatest beneficiaries of the boom; these tend to be higher order capital-intensive sectors, particularly those that have been a major focus of the boom such as real estate-related and financial businesses prior to the GFC of 2008, railroad companies prior to the crash of 1873, or dotcom enterprises prior to the bear market of 2000-2002. Since physical gold and silver are not employed productively (they are akin to currencies), they are not *directly* affected by economic fluctuations, but their prices in terms of fiat currency are nevertheless driven by macroeconomic factors which determine market expectations regarding the likely reactions of the monetary and fiscal authorities to these fluctuations.

A factor that exacerbates downturns is the fact that banks have to recognize large impairments in the event of widespread defaults, which *ceteris paribus* reduce the money supply if banks are forced to call back loans or become insolvent themselves. Deleveraging has a dampening effect on nominal GDP and as a further consequence raise the real debt burden of debtors who are still solvent. The fear of such a deflationary downward spiral has motivated central banks to massively increase central bank credit creation after the collapse of Lehman Brothers and adopt non-conventional monetary policies, read: quantitative easing.

What will happen next? Has our debt money system already moved past its sell-by date and crossed the point of no return? If the main features of the current monetary system are retained, the following measures may conceivably be implemented to kick the can down the road:

- **The already mentioned accumulation of debt by a sector with comparatively low indebtedness.** The simplest measure from an economic policy perspective is the expansion of government debt.[106] Keynes reportedly said that he tried to save the debt-funded and growth-oriented economic system by penning the "General Theory of Employment, Interest and Money", and by recommending deficit spending, which he advocated as a temporary measure. This category includes beating the war drums and engage in the associated propaganda aimed at convincing people to accept higher government debt for the financing of war. **This applies to the wars against terror, poverty, climate change, etc. as well** (all of which represent a fascinating mixture between Keynesian ditch-digging and cronyism on a breathtaking scale).

- **Increasing the number of potential borrowers**, e.g. by boosting immigration, facilitating and /or subsidizing the taking up of new loans, making additional assets eligible as collateral for credit, creating a favorable environment for debt as opposed to equity financing, etc.

- **Rate cuts**, which lower the costs of servicing both outstanding and future debt, and thereby broaden the ability and willingness of potential borrowers to take out loans.

- **Helicopter money,** i.e., distribution of newly created fiat money to the majority of the population.[107]

- **Solutions alien to the system**: the problem of systemic over-indebtedness could only be overcome for good if money were no longer created as a result of credit expansion.[108] That would not amount to abolishing credit as such, but only that payment is effected with money that is not tied to debt (more specifically, money that does not consist of demand deposits, as the practice of lending out demand deposits leads to the legal absurdity of different persons effectively having a legal claim to the same money at the same time).

c. Conclusion

A calamitous end or (for now) a never-ending calamity? Even though the timing of the (final) denouement cannot be forecast with precision, and even though it cannot be ruled out that the inevitable is postponed with further, massive interventions in the monetary system, such as cash bans, or a banking and fiscal union in Europe, eventually no-one will be able to skirt making fundamental decisions - neither politicians, nor investors.

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[106] The financial metric "public debt as a percentage of GDP" is problematic in several respects, irrespective of treaty stipulations (such as e.g. the Maastricht criteria). On the one hand the debt of one sector accounting for economic output in monetary terms is compared to total economic output, which makes this debt appear relatively unremarkable. On the other hand, assets owned by the State, which are usually not evaluated – often exceed GDP significantly, and from this perspective the debt burden appears more worrisome than it is. Lastly, GDP is a very dubious statistic by itself, as it leaves out all economic activity in the higher stages of the production structure with the exception of fixed investments, but includes all sorts of unproductive spending. It moreover contains estimates which are beyond measurement and hence are highly subjective (e.g. lately spending in the "shadow economy", including plainly criminal activities, is "counted" as well).

[107] See "In Gold we Trust" 2016 – Helicopter Money – The Reflation Policy's Ace in the Hole?

[108] Proposals of this type are for instance fully covered money (New Currency School, Prof. Huber), or "active money" as proposed by Flossbach von Storch economist Thomas Mayer.

The War Against Cash Enters the Next Round

Key Takeaways

- The war against cash intensifies, both legally and in academic and public debate.
- The arguments of proponents of the abolition of cash usually fail to stand up to scrutiny. A popular pretext is the fight against terrorism financing.
- The introduction of a cashless payment system would intensify financial repression, as negative interest rates would not only be imposed on bank reserves, but also on private customer deposits. It would no longer be possible avoid holding deposit money in favor of cash that is immune against negative interest rates.

"For the alchemists, cash represents an annoying obstacle, because it prevents them from lowering base interest rates deeply into negative territory in order to stimulate economic activity. By fleeing into cash, households and companies can escape the nominal devaluation of their bank deposits."

Yves Mersch, member of the ECB Council

In the past two years, we have discussed the "war against cash" extensively. The attacks from a phalanx of economists, central bankers, commercial banks and politicians have not diminished since then. On the contrary, in the face of the worldwide increase in terror attacks, particularly in Europe, and ongoing pressure on public budgets, the cash ban issue is increasingly dragged into the spotlight.

"Some observers are concerned about what they call 'the war on cash'. Don't worry – the war on cash is over and the government won."
Jim Rickards

In a highly-recommended study entitled "Cash, Freedom and Crime. Use and Impact of Cash in a World Going Digital"[109], Deutsche Bank Research demolishes numerous popular myths surrounding cash, inter alia in the context of crime and terrorism. Without cash there are no longer bank robberies at gun point, instead there are now electronic bank robberies. Fraud involving credit cards and ATM cards is massively increasing in Sweden, the country considered the pioneer of the cashless society. The argument that adopting a cashless payment system would facilitate the fight against terrorism doesn't hold water either:

"*As regards terrorism in Europe, an analysis of 40 jihadist attacks in the past 20 years shows that most funding came from delinquents' own funds and 75% of the attacks cost in total less than USD 10,000 to carry out – sums that will hardly raise suspicions even if paid by card.*"[110]

"There is a pervasive and increasing conviction in world public opinion that high-denomination bank notes are used for criminal purposes."
Mario Draghi

Moreover, many terrorists, particularly if they are prepared to risk their own death, won't be deterred by prohibitions, just as stricter gun laws have no impact on people who must use unregistered weapons for their crimes. Often, they are unable to get hold of a weapon by legal means anyway if they have a criminal record. Planned terror attacks are as a rule characterized by a meticulous and careful approach. At best a cash ban might make financing of terrorism more difficult (even that is doubtful), but at the price of subjecting the law-abiding peaceful population at large to even more intrusive surveillance.

Legislators have passed additional regulations in the past twelve months which at least restrict the use of cash; bans of high-denomination banknotes (e.g. the 500 euro note) and (lower) thresholds for legal cash payments. There are however also technological developments that are significantly reducing the transaction costs of cashless payments and are therefore making cash comparatively unattractive.

In Sweden, which is widely regarded as the pioneer of a cashless society, an app called "Swish"[111] introduced by the country's leading banks has revolutionized cashless payments. To this point, the app has been downloaded 5.5 million times. In the Scandinavian country only 2% of all payments are settled in cash these days.

Sweden's central bank expects that this percentage will decline by another ¾ to 0.5% by the end of the decade. 900 of the 1,600 bank branch offices in the country no longer have any cash in store.[112]

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[109] https://www.dbresearch.com/PROD/DBR_INTERNET_EN-PROD/PROD0000000000427044/Cash%2C_freedom_and_crime%3A_Use_and_impact_of_cash_in.pdf
[110] See "Cash, Freedom and Crime. Use and Impact of Cash in a World Going Digital"
[111] https://www.getswish.se
[112] https://www.theguardian.com/business/2016/jun/04/sweden-cashless-society-cards-phone-apps-leading-europe

The Macroeconomics of De-Cashing

"In principle, cutting interest rates below zero ought to stimulate consumption and investment in the same way as normal monetary policy. Unfortunately, the existence of cash gums up the works."
Kenneth Rogoff

The academic debate continues unabated. A paper that has recently triggered intense debate is the IMF working paper "The Macroeconomics of De-Cashing", which was published in March 2017.[113] Its author Alexei Kireyev examines the possible macroeconomic consequences of abolishing cash. His central conclusions are:

- A cashless payment system would make the monetary policy transmission mechanism more efficient, as there would be very little or no cash available anymore. In particular, it would become possible to implement negative interest rates on a broad front, in order to boost consumption.

- Since a decline in cash holdings would go hand in hand with an increase in demand deposits at banks, the banking sector would be able to extend more loans. That would lower the level of interest rates and boost economic growth.

- A sudden increase in the demand for cash is a sign of an imminently impending financial crisis. Shortly before the collapse of Lehman Brothers in September 2008, demand for cash currency increased significantly. That was a sign that bank customers increasingly lost confidence in the solvency and liquidity of commercial banks. This warning signal would no longer be available if cash were abolished.

- A cashless economy makes tax collection easier, as the example of Sweden illustrates.

"We decide on something, leave it lying around and wait and see what happens. If no one kicks up a fuss, because most people don't understand what has been decided, we continue step by step until there is no turning back."
Jean-Claude Juncker

Regardless of a superficially balanced approach in large parts of the text, the article clearly evinces an underlying bias toward supporting the abolition of cash. Several arguments in the paper are fallacious and represent little more than intellectual kowtowing to the prevailing zeitgeist. Thus a cashless economy is supposedly going to improve "financial inclusiveness" - as every citizen and economic actor would be forced to open a bank account; it would reduce illegal immigration – as employment of illegal immigrants would become more difficult; and it would help protect the environment – because the production of paper or polymers for banknotes has a greater impact on the environment than electronic money.

Whether the given objective of fighting crime and black markets can be realized by banning cash remains a highly controversial issue. Thus, Professor Friedrich Schneider, one of the most renowned experts in the areas shadow economy and tax evasion, shows that a cash ban would reduce illicit employment be a mere 10% and organized crime by less than 5%.[114]

The paper's conclusions ultimately read like a political manual for the abolition of cash by means of salami tactics. In other words, to prevent the

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[113] http://www.elibrary.imf.org/abstract/IMF001/24164-9781475589252/24164-9781475589252/24164-9781475589252.xml?rskey=cNjwvq&result=3&redirect=true link for cheapskates: http://www.jovanovic.com/DATA/Supression-liquide-FMI-2017.pdf
[114] See Flierl & Malisch (2016): *Ready for Rally*, Smart Investor 11.2016, p. 40

population from getting alarmed, it is to be weaned off cash in tolerable doses through a piecemeal approach. *Economic incentives for cashless payments are to be put in place*, i.e., specifically, fees for cash payments are supposed to be introduced or raised. In our assessment, the most important point though concerns the notion that "de-cashing" would be "*critical for the efficiency*" of a negative interest rate policy.

In Bitcoin We Trust?

Key Takeaway

- Bitcoin and cryptocurrencies may become an integral part of wealth management from the perspective of portfolio diversification.
- Bitcoin represents an entirely different asset class, with different risks and different benefits. The correlation between gold and Bitcoin has been low and slightly negative.
- Ambiguity aversion may be negatively biasing the price of bitcoin downwards. As time passes, uncertainty and the subsequent discount it wields on the price of bitcoin should decrease.

"Spend some time with Bitcoin. Learn it, challenge it, and use it. You can assume no government wants you adopting this system in any capacity, and for that reason alone it's worth consideration by honest, moral, and industrious people."

Erik Voorhees

We want to sincerely thank Demelza Hays for contributing this chapter. Demelza is a blockchain researcher at the Centre for Global Finance and Technology at the Imperial College in London, and she operates the only Bitcoin ATM in Liechtenstein. At the University of Liechtenstein, Demelza is completing her doctoral thesis on the role of cryptocurrency in asset management, and she teaches a course for bachelors and masters students on Bitcoin and the Blockchain technology. **In partnership with Incrementum, Demelza is working on cryptocurrency research and a crypto currency fund vehicle.**

"I think the internet is going to be one of the major forces for reducing the role of government. The one thing that's missing but that will soon be developed, is a reliable e-cash."
Milton Friedman

After being ridiculed as money for computer nerds and a conduit for illegal activity, investors are finally beginning to take notice of bitcoin[115] **and the underlying technology, the blockchain.**[116] After 20 years of failed attempts at making a private virtual currency, Bitcoin emerged triumphantly out of the 2007/08 global banking crisis. The creator of Bitcoin, who is still unknown but goes by the pseudonym Satoshi Nakamoto, was determined to provide a decentralized, private, and secure means of transferring value online that did not rely on trusting sovereign entities, central banks, or financial intermediaries.[117] Although Bitcoin and the underlying blockchain were originally designed to replicate the traits of gold that make it uniquely suited to be money, Bitcoin represents a unique asset class and can be an integral part of wealth management from the perspective of portfolio diversification.

a. To Bitcoin or Not to Bitcoin?

"Banking is necessary, banks are not."
Bill Gates

Two years ago, Bitcoin was considered a fringe technology for libertarians and computer geeks. Now, Bitcoin and other cryptocurrencies, such as Ethereum, are gaining mainstream adoption. Bitcoin's market capitalization of $36 billion has already surpassed the market cap of several fiat currencies such as Icelandic krónas and Guatemalan quetzals. In March of 2017, the price of bitcoin soared above the price of an ounce of gold for the first time. While gold was trading around $1,225, bitcoin jumped up to $1290.

In May, the price of bitcoin breached €2,400. However, as I wrote in Forbes Austria , comparing gold and bitcoin is akin to comparing apples and oranges. Gold is measured in weight, whereas bitcoin is only measured in bitcoin.[118] For example, the price of one bitcoin surpassed the price of a gram of gold in 2011. However, the price of bitcoin has not surpassed the price of one ton of gold. Not yet at least.

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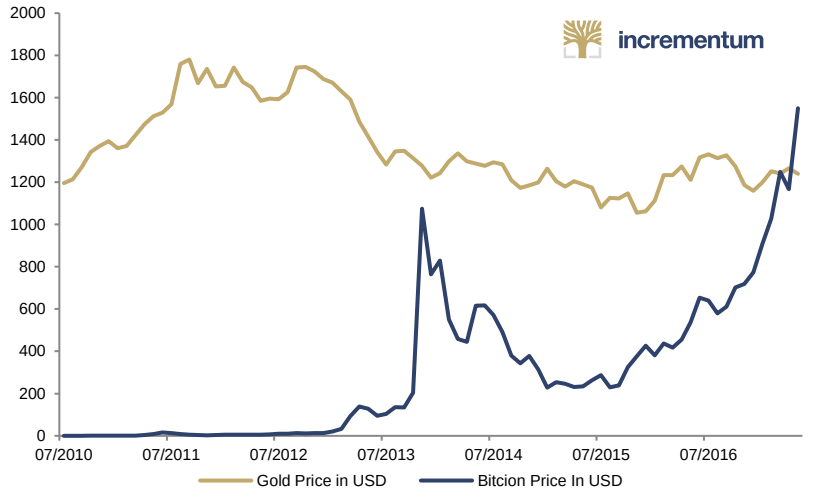
[115] The concept of Bitcoin is written with a capital B while bitcoin, with a lower-case "b" refers to the monetary unit. Therefore, *bitcoin* is the cryptocurrency used on the *Bitcoin* network.
[116] Also referred to as the distributed ledger technology (DLT)
[117] Stephanie Lo & J Christina Wang, Currency Policy Perspectives: Bitcoin as Money?, 14-4 FED. RESERVE BANK OF Bos. 2 (Sept. 4, 2014), http://www.bostonfed.org/economic/currentpolicyperspectives/2014/cppl404.pdf.
[118] Wieler. (2017). Goldmoney.com

Exchange Rates of Gold and Bitcoin against USD (Monthly Averages)



Source: Quandl.com, Incrementum AG

The price of bitcoin is determined in the same way as the price of all other goods: by the forces of supply and demand. However, bitcoin's limited supply means that changes in demand directly impact the price, and as can be seen by the price of bitcoin, demand has been growing substantially. Demand is growing for two main reasons. Fundamentally, the technology provides a useful service to users who want to trade value across the world without an intermediary. Bitcoin transactions can be sent at any time of day, to any place in the world, for a transaction fee ranging from $0.00 to $0.40 regardless of the transaction size. Bitcoin's growing popularity as a payment system can be seen by the increasing number of transactions. Every day, approximately 315,000 transactions occur worldwide with a volume of roughly $100 million.

Secondly, speculators are buying bitcoin in hopes of profiting from price fluctuations. However, the recent price hike to more than €2,400 per bitcoin has left investors wondering if it is too late to get in on the action. Despite the strong growth in the price, exposure to Bitcoin is still a good decision in 2017.

- **New Asset Class** – Bitcoin represents a distinct asset class with unique fundamental and statistical characteristics. ARK Invest has outlined 4 main reasons that Bitcoin provides portfolio diversification: investability, politico-economic features, correlation of returns, and the risk-reward profile.[119] Although only a limited amount of data is available, the historic prices of bitcoin have a low correlation with other asset classes. As stylized by Burton Gordon Malkiel in his fantastic book "Random Walk Down Wall Street", adding an asset class with a low correlation with the other portfolio holdings can minimize the downside risk of the overall allocation.

- **Ambiguity Aversion** – Bitcoin is so young and nobody knows exactly how this invention will impact the world. Bitcoin's price data only covers the past six years, which means there is basically no data available for statistical analysis. The Ellsberg paradox shows that people prefer outcomes with known probability distributions compared to outcomes where the probabilities are

[119] Burniske/White. 2017. Bitcoin: Ringing the Bell for a New Asset Class.

unknown.[120] The estimation error associated with forecasts of bitcoin's risks and returns may be negatively biasing the price downward. As time passes, people will become more "experienced" with bitcoin, which may reduce uncertainty and the subsequent discount it wields on the price of bitcoin.

- **Big Investors –** Bitcoin has a positive feedback loop. The more people that use bitcoin, the more valuable each Bitcoin is, which makes more people want to use it. In 2014, the New York Stock Exchange (NYSE) invested in the U.S. based bitcoin exchange, Coinbase. In 2015, the NYSE launched the Bitcoin Investment Trust that enabled IRA and Roth IRA investments. In 2016, over ten universities, including Stanford and Princeton, offered courses specifically on Bitcoin. In addition to compelling historical price data, the future prospects look encouraging. New business models, such as bitcoin banks, brokers, and custodians are being developed that enhance Bitcoin's user experience and popularity.

- **Negative interest rates –** Hostility from government and banks towards bitcoin underscores the value of this technology. The ECB is printing €60bn per month and shows no sign of abatement. The ECB's deposit rate of -0.4pc is effectively a tax on storing your money in a bank. The SNB is following suit in order to prop up Swiss exports to the Eurozone. Bitcoin provides an alternative to inflationary fiat currencies that incur fees for fractional reserve storage. Bitcoin's total supply is fixed to 21 million and can be stored for free.

- **Cashless Society** – We are slowly moving towards a cashless society. The majority of fiat currency only exists digitally. As governments demonetize physical bills, more transactions will be made digitally. Bitcoin presents an alternative to credit card companies and banks that are frequently hacked, charge high fees, and freeze accounts. Offline or "cold" bitcoin wallets are protected by military grade cryptography and require no fees or paperwork.

"I don't know if helicopter money will help the US economy. But I am pretty sure it will help the Bitcoin economy."
Balaji S. Srinivasan

b. Bitcoin – Digital Gold or Fool's Gold?

"You can't stop things like Bitcoin. It will be everywhere and the world will have to readjust. World governments will have to readjust."
John McAfee

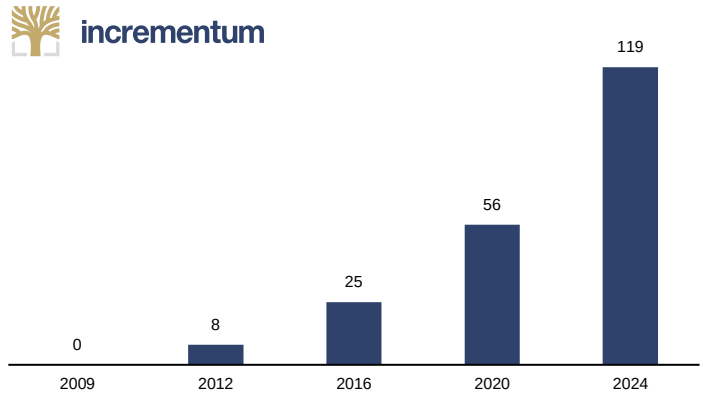
Like bitcoin, gold also provides protection from negative interest rates and fiat demonetization. Importantly, the stock to flow ratio (StFR) of bitcoin is similar to gold's. Gold has a StFR of approximately 64 years, while bitcoin's is approximately 25 years. The entire amount of bitcoin ever mined totals approximately 16.32 million. That is the stock. Every ten minutes, the network mints 12.5 new bitcoins. Therefore, there is a daily inflation of 1800 new coins. In 2017, annual production will be approximately 657,000 bitcoin. That is the flow. By dividing the stock by the flow, we can see that bitcoin's StFR is lower than gold's. The StFR shows that a large gap exists between the annual production of bitcoin and total supply available. Not only is bitcoin scarce but also the available stock is relatively constant over time, which generates confidence in the money.

[120] As noted by John Maynard Keynes (1921), and later Daniel Ellsberg (1961), the Ellsberg Paradox describes a situation in which people prefer to bet on the outcome with a high level of known risk compared to an unknown risk.

"There are 3 eras of currency: Commodity based, politically based, and now, math based."
Chris Dixon

The StFR of bitcoin is expected to rise further over time because every four years the amount of bitcoin minted every is halved. The last programmed "halving" occurred in June of 2016. Therefore, the next halving will occur in 2020. At this time, the StFR ratio will increase to approximately 56 years.[121] The StFR of bitcoin should surpass gold's during the next five years. Figure 2 below shows the stock flow ratio of bitcoin over time. Prior to January 3, 2009, no bitcoin existed. Therefore, the stock to flow ratio was effectively zero. However, the rapid reduction in the amount of bitcoin mining over time is increasing the StFR. By 2024, only 3.125 bitcoin will be mined every ten minutes resulting in a StFR of approximately 119 years.

Bitcoin's Stock to Flow Ratio



Source: Demelza Hays, Incrementum AG

"Gold is bitcoin without electricity."
Charlie Morris

The inverse of this calculation, the inflation rate, shows that the stock of bitcoin is being increased by approximately 4% annually. The supply of newly minted bitcoin follows a predictable inflation rate. Satoshi modeled the flow of new bitcoin as a Poisson process[122], which will result in a discernible inflation rate compared to the stock of existing bitcoin by 2020.

The low and steady inflation rate of bitcoin is one of the most attractive features of this experiment in monetary technology. Like gold, decisions concerning the issuance of money and control of the money supply are not left in the hands of fallible humans. Bitcoin transfers this responsibility from humans to computers whereas gold relies on nature. Algorithmic or programmable money takes passive "digital money"[123] controlled by banks and governments and makes it active "virtual currency"[124] that is controlled by software protocols and cryptographic algorithms that are inherent to the currency itself.[125]

However, gold's market capitalization of $7 trillion puts bitcoin's market cap of $66 billion into perspective. The next chart shows the market caps of gold, silver,

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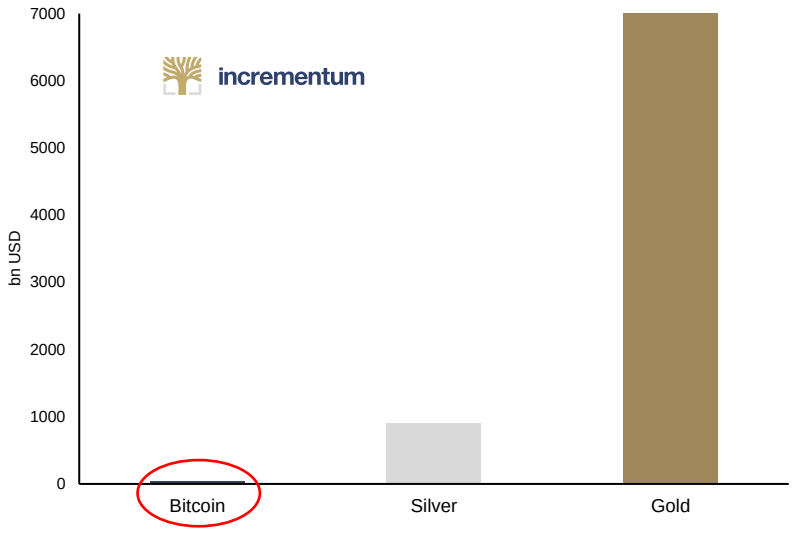
[121] 18, 279,000 stock divided by 328500 flow in 2020.
[122] https://en.wikipedia.org/wiki/Poisson_point_process
[123] "Digital money is electronic money or in other words so called fiat money stored electronically i.e. money in bank accounts in various currencies like Swiss Francs, US Dollars, Euros, etc, used to make payments. When you pay cash into your bank account it becomes digital (electronic) money for you." Kremeth. 2016. Incrementum.
[124] According to the ECB virtual currencies, such as bitcoin, are, "a type of unregulated, digital money, which is issued and usually controlled by its developers, and used and accepted among the members of a specific virtual community." European Central Bank. 2012. Virtual Currency Schemes.
[125] King. 2016. On the Use of Computer Programs as Money.

and bitcoin. Although, bitcoin's market cap has been rallying, it is still a mere 0.5% of golds market capitalization.

Market Capitalization: Bitcoin, Silver, Gold (bn. USD)



Source: Demelza Hays, Incrementum AG

As money, bitcoin has three main advantages and four main disadvantages in comparison to gold.

Bitcoin's Pluses:

- **Fast clearance and settlement of transactions** – Bitcoin offers immediate clearance because anyone can make an account at any time without any identification documents. Today, over 125,000 merchants worldwide accept bitcoin. In contrast, a Google search for merchants that accept gold as payment leads you to a few dusty goldbug forums that discuss ways to make gold great again.

- **Low shipping costs** – Transaction fees for "shipping" bitcoin from one account holder to another ranges from free to forty cents regardless of the amount of bitcoin being sent. What matters for a payment network and a medium of exchange is how quickly you can put the media to use. In this sense, gold is slow money. The physical aspect of gold is great, until you try to stuff it into your USB port in order to send it to someone across the globe.

- **Low storage costs** – Storing bitcoin amounts to storing a large string of numbers that represent digital data. Online, paper, and brain wallets are completely free of charge. Hardware wallets can range from €15 to €240; however, this is often a fraction of the cost of storing physical gold.

"Gold is a great way to preserve wealth, but it is hard to move around. You do need some kind of alternative and Bitcoin fits the bill. I'm not surprised to see that happening."
Jim Rickards

Bitcoin's Drawbacks:

- **Risk of a 51 percent attack** – This is when one miner, a group of miners, or a mining pool gains a majority of the power on the network. Volatility in the price of bitcoin during the past few weeks has stemmed from this risk. A bitcoin miner is an individual or group of people that run a version of the Bitcoin software on a hardware device specifically designed for mining bitcoin called an application-specific integrated circuit (ASIC). Mining is the process of adding new transactions to the Bitcoin database of previous transactions. The debate between big blockers from the Bitcoin Unlimited (BU) camp and little blockers from the segregated witness (SegWit) camp amounts to what version of the Bitcoin software should be run on the hardware devices. The most popular software being run by miners, Bitcoin Core, has a data cap of 1 MB per block of transactions. A new block of transactions is mined approximately every 10 minutes, which equates to a limit on the new data that the network can record of 1 MB every ten minutes. The BU miners want to raise this limit while the SegWit camps wants to decrease the data size of each transaction. The president of the largest Bitcoin mining pool, who is a proponent of Bitcoin Unlimited, threatened that "… [a 51%] attack it is always an option."[126]

- **Risk of altcoins taking market share** – Cryptocurrencies, like Bitcoin and Ethereum, embody the 20th century economist Friedrich von Hayek's dream of privately competing currencies.[127] Over 1,000 new cryptocurrencies have been invented since Bitcoin's inception. Each new coin promises to improve over bitcoin in one way or another. However, none have been able to surpass bitcoin (yet). Computers advanced from ENIACs in the 1950s to laptops in the early 2000s to Raspberry Pi's that cost $5 and fit in the palm of your hand. The Bitcoin blockchain is a slow energy hogging database, and entrepreneurs from around the world are vying to make a coin that can steal bitcoin's market share. The market will choose the winners and losers.

- **Risk of changes in regulations** – In Europe and in the US, the regulatory outlook is bleak. In spring, the SEC rejected the Winklevoss Bitcoin ETF, and the European Union's 4th Anti-Money Laundering Directive (AMLD) argues for stricter monitoring of cryptocurrency users, miners, exchanges and wallet providers.

- **Reliance on internet, electricity, and hardware devices** – Without internet, the speed of broadcasting a transaction to all of the nodes across the network would decline steeply. The increased latency would result in more forks of the Bitcoin network because miners would build blocks with an incomplete list of recent transactions. Similarly, Bitcoin's proof-of-work mining is estimated to cost $400 million in electricity and hardware per year.[128]

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[126] Shin. 2017. "Is This Massive Power Struggle About To Blow Up Bitcoin?" Forbes.
[127] Hayek. 1978. *Denationalization of Money: The Argument Refined*. London: Inst. of Economic Affairs. Print.
[128] Aste. 2016. The Fair Cost of Bitcoin Proof of Work.

Conclusion

Overall, Bitcoin and gold represent two distinct asset classes – and should be treated as such by investors. The medium-term outlook for both of these classes is positive because they are both deflationary monies that allow investors to counter expansionary fiat currencies and artificially low interest rates. Future generations may store gold while employing a cryptocurrency as a medium of exchange or cryptocurrency may even replace gold as the best vehicle for wealth accumulation if debasement or expropriation of gold becomes widespread. However, buyers beware: A growing body of academic research recommends 2-4 percent of a diversified portfolio should be in Bitcoin[129] compared to up to 20 percent that may be invested in gold. **Bitcoin faces several hurdles; however, this nascent technology may provide a glimpse of what will eclipse our current system of fiat currencies.**

At Incrementum, our interest in bitcoin and cryptocurrencies has evolved from a mere curiosity to a legitimate investment case. Due to the lack of institutional grade investment vehicles for bitcoin, Incrementum has begun working on a cryptocurrency investment fund. Official news about the cryptofund is expected to be released in the third quarter.

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[129] Hong. 2016. Bitcoin as an alternative investment vehicle; Brière, Oosterlinck, & Szafarz. 2013. Virtual Currency, Tangible Return: Portfolio Diversification with Bitcoin; Pandey. 2014. The Value of Bitcoin in enhancing the efficiency of an investor's portfolio.

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The Portfolio Characteristics of Gold

Key Takeaways

- Gold and the US dollar are seemingly substitutable assets during economic crises. While the dollar can benefit from crises outside the dollar area, gold represents the ultimate fiat money hedge.
- Our analysis indicates that gold benefits from negative and slightly positive real interest rates. It outperforms other asset classes such as stocks in such an environment.
- Crises demonstrate that gold is an excellent hedge against stock market volatility. Depending on contingent circumstances this can involve a variety of leads and lags, as gold can also serve as a source of short term liquidity.

"It aint't what you don't know that gets you in trouble. It's what you know for certain that just ain't true."

Mark Twain

a. Introduction

The analysis of gold in a portfolio context is a well-worn tradition in our annual gold studies. We presented an extensive discussion of the extraordinary portfolio characteristics of gold, the relationship between gold and interest rates, as well as the opportunity cost of holding gold in the *2015 In Gold We Trust* report, while in 2016 we examined to what extent gold is suitable as a hedging instrument, i.e., as portfolio insurance.[130] In this context we considered gold as a fundamental component of a permanent portfolio and thereafter discussed its anti-fragility properties.

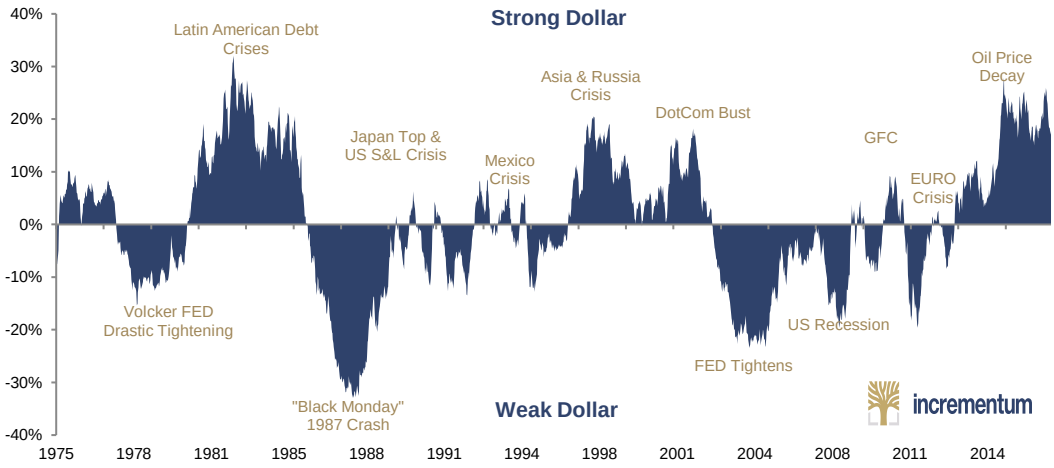
"It's all about this, dear Captain: Gold. And, sadly, the world supply is limited. Which means the amount of gold I can possess is also limited. I hate limits."
Auric Goldfinger

In this year's report, we expand on the findings discussed in previous years. First, we will examine the relationship between gold and the US dollar. This relationship is particularly important in crisis situations. In the subsequent section we will delve more deeply into the relationship between gold and real interest rates, and in the last section we will take a closer look at the relationship between gold and stocks. **In this context, we are focusing particularly on the performance of gold during severe bear markets in stocks.**

b. Gold and the US Dollar

Despite the structural problems of the US economy, the US dollar remains the undisputed senior international fiat currency and with that a mirror image of global events. The following chart shows the thirty-month rate of change of the USD Index.

USD Index: an indicator of financial crises?



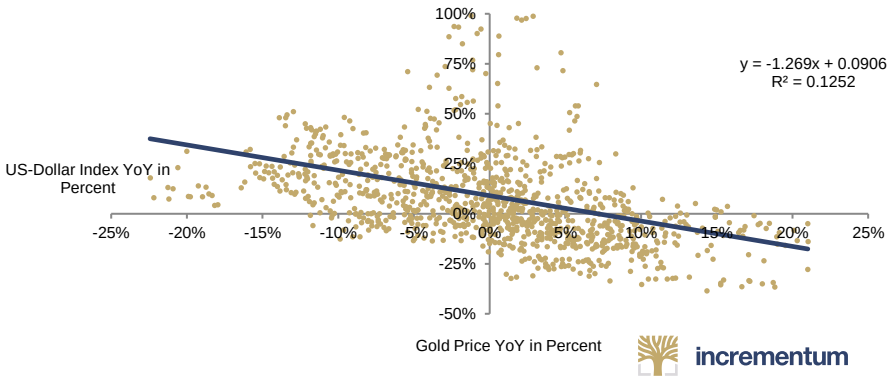
USD index (30m. rate of change)
Source: FRED, Incrementum AG

As one might suspect, the USD Index is very useful as a coincident indicator of economic and political events and crisis situations, as it regularly mirrors local

[130] The reports can be downloaded unter the following links:
"In Gold we Trust" 2015 – The Extraordinary Portfolio Characteristics of Gold
"In Gold we Trust" 2016 – Gold in the Context of Portfolio Diversification

crises. Crisis situations abroad that don't impact the US economy directly – such as the Latin American debt crisis, or the Asian & Russian crisis - traditionally lead to flight into the dollar. A rising USD Index reflect these developments. Particularly in such stress situations many investors still have confidence in the US dollar and regard it as a safe haven from external threats – a quality frequently attributed to gold as well. In line with this, one might be inclined to expect a positive correlation between gold and the US dollar.

Correlation between the US dollar index and gold since 1974



Source: FRED, Incrementum AG

As the chart above illustrates, this is not the case though. In reality there is a significant negative correlation between the USD Index and gold. How does that mesh?

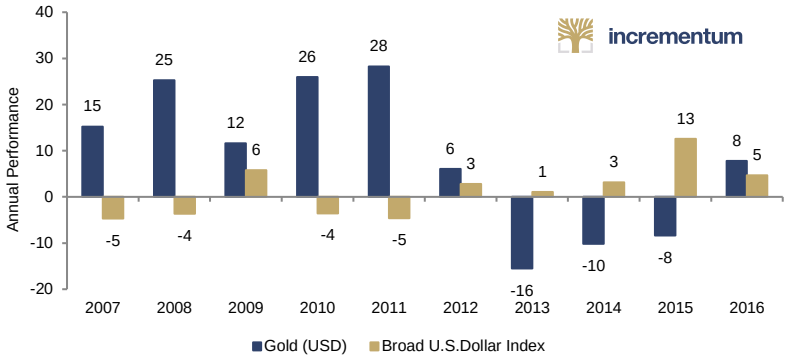
"Gold is the anticomplex asset, and therefore one asset that an investor should own in a complex world."
Jim Rickards

A possible explanation for the negative correlation between gold and the dollar may be found in the attribute as a safe asset in crisis situations. Although the dollar and gold may superficially be considered substitutable, a closer examination reveals a different picture. **In *local* crises, the US dollar is seen as a desirable asset by many market participants because the survival of the fiat money system as such is not questioned**.

"What's the difference between a liquidity and a solvency event? Usually about an hour and a half."
Russell Napier

It is different in the case of *systemic* crises. In these situations, confidence in fiat currencies and the banking system is shaken and many market participants pay heed to gold's historical function as money. Particularly in systemic crises, gold is perceived to maintain its value, while paper money is in danger of becoming completely worthless.

Performance of US dollar index and gold



Source: FRED, Incrementum AG

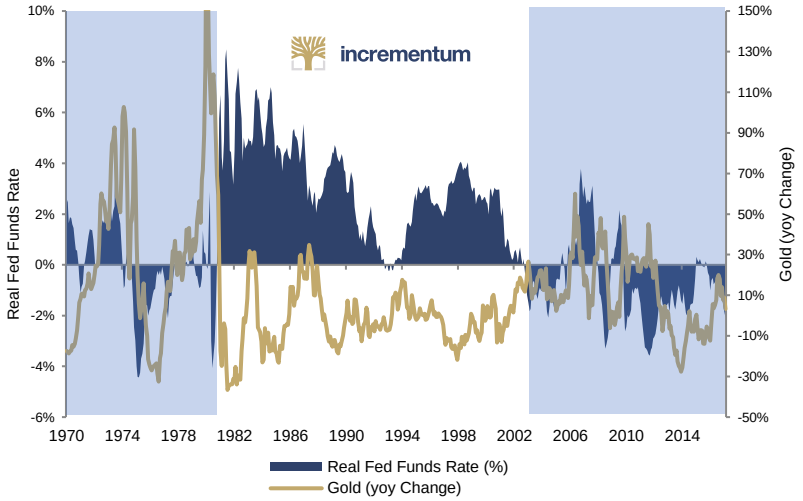
In general, the traditional inverse correlation between gold and the US dollar is very helpful in a portfolio context to reduce volatility. That applies specifically to the current market environment, since the US dollar has already appreciated significantly against other fiat currencies in recent years. **Over the medium to long term not only the instability of the monetary system, but the US dollar's high valuation should provide significant upward potential for gold**.

c. Gold and Interest Rates

In our *2015 In Gold We Trust* report we already examined the relationship between gold and interest rates. The conclusion of our analysis was that rising nominal interest rates did not necessarily imply a decline in gold prices. We also pointed out that real interest rates are a more important driver of gold prices. We want to build on this and expand our analysis with respect to real, i.e., price inflation-adjusted interest rates.

The following chart shows the trends in the real federal funds rate and the gold price since 1970.

Real interest rates and gold



Source: FRED, Incrementum AG

"Modern portfolio theory is Ptolemaic theory. Are powerful institutional investors ready to fight?"
Ben Hunt

It turns out that time periods in which real interest rates are in negative territory for most of the time (highlighted in blue on the chart) go hand in hand with very strong gold prices. In the time period 1970 to 1980 gold climbed from 34,90 to a peak of 850 USD, in an environment of mostly negative real interest rates. The same applies to the 2003-2017 time period, in which gold rose from 356 to 1,260 USD (as of end of May2017). That represents a cumulative performance of approximately 9% per year. Conversely, markedly positive real interest rates create a relatively difficult environment for gold, as the period 1980 to 2003 makes clear.

"Better to have, and not need, than to need, and not have."
Franz Kafka

The performance of different asset classes in different real interest rate environments is relevant from an investment and portfolio hedging perspective. The following table shows the average monthly performance of gold, silver, the S&P 500 Index as well as the Dollar Index since 1970 in a variety of real interest rate environments (in terms of the real Fed Funds rate).

Performance of gold, silver, S&P 500 and the dollar index

Real Yield USD	Average monthly performance			
	Gold	Silver	S&P 500	US-Dollar Index*
below -2%	0.89%	-1.52%	0.28%	0.24%
-2% to -1%	0.09%	0.35%	1.23%	-0.01%
-1% to 0%	2.07%	3.13%	0.31%	0.11%
0% to 1%	1.66%	2.01%	0.05%	0.34%
1% to 2%	0.69%	-0.89%	-0.17%	-0.07%
above 2%	-0.17%	-0.49%	0.91%	-0.24%

*Data from 1973
Source: FRED, Bloomberg, Yahoo Finance, Incrementum AG

The historical record indicates that gold and silver performed best in times when the real federal funds rate was in a range from -1% to +1%.

While gold performs best when real rates are negative, silver has problems with an environment of negative real rates. That makes sense intuitively, if one interprets the real federal funds rate as a proxy for expansionary or restrictive monetary policy.

A negative real federal funds rate (price inflation > federal funds rate) traditionally signals that monetary policy is accommodative or expansionary. By contrast, a clearly positive real federal funds rate (federal funds rate > price inflation) indicates a restrictive or hawkish monetary policy. As silver has a sizable demand component as an industrial metal in addition to monetary demand, it is no surprise that its performance often differs from that of gold. One must also keep in mind that silver tends to attract more speculative interest, not least because it is the smaller market. As the table also illustrates, volatility in silver tends to be far pronounced than in gold, i.e., it both outperforms to the upside and underperforms to the downside.

Along with the above, one should consider the following: empirical data such as these do have value in practice, and being aware of them is quite important for investors. It should be noted in this context that chart comparisons also show that there are frequently sizable leads and lags in evidence – at times the gold market discounts the future behavior of real interest rates in advance, and at times it reacts to the appearance of positive or negative real interest rates with a slight lag. The market is very often right, but it is not always right – in fact, it is a truism that the market is wrong at turning points, since at major lows and major peaks, it discounts a future that is not going to play out.

Lastly, experience also shows – and this is actually logical in a fiat money system in which the paper dollar is legal tender and must be purchased to liquidate dollar-denominated debt **– that gold will tend to serve as a source of liquidity in the early stages of crises.**

For instance, at the height of the 2008 panic, gold prices briefly declined and the US dollar soared, as banks outside the dollar area scrambled to obtain dollar liquidity and real interest rates spiked as inflation expectations decline rapidly (a situation known as a "deflation scare" - the gold price quickly recovered from this and soared subsequently). Gold reserves were used as collateral for dollar loans, and the lenders hedged the gold exposure they acquired when accepting gold as collateral. Such hedging activities always involve outright selling somewhere down the line of the chain of transactions. Gold is always and everywhere accepted as collateral – when push comes to shove, its acceptability as collateral exceeds that of any debt instrument, including treasury bonds. **Gold is the only money that can stand tall even without "backing" from an outsized military force.**[131]

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131 This was shown again at the height of the euro area debt crisis in 2011, when the Bank of International Settlements lent a part of its gold reserves to European commercial banks to enable them to obtain dollars, using its gold as collateral. At the time, euro basis swaps (a.k.a. "euro death swaps") nosedived deeply into negative territory and CDS spreads on senior unsecured bank debt soared, indicative of severe funding stress in the banking system.

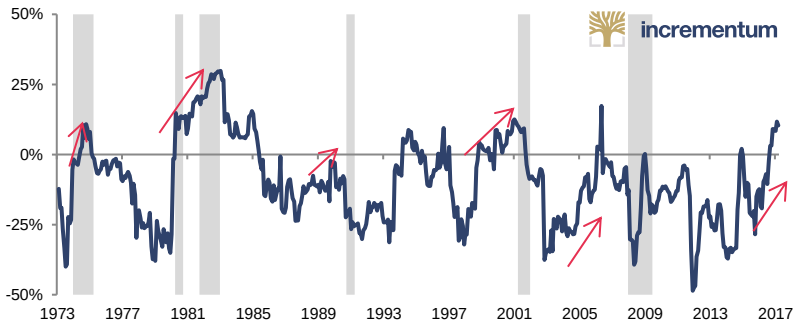
d. Gold and Stocks

"Volatility is the only asset class. We are all volatility traders and the only question is whether we realize it or not."
Christopher Cole

In the following section, we want to take a closer look at the relationship between gold and the stock market. We have already pointed out in previous reports that a rising US stock market does as a rule not represent a positive environment for the gold price. Below we want to focus specifically on the volatility of the correlation between gold and the S&P 500 Index, as well as the performance of gold during bear markets in stocks.

To begin with, here is the three-year rolling correlation[132] between gold and the S&P 500 Index Index.

3 year rolling correlation between gold and the S&P 500 Index



Source: FRED, Incrementum AG

"Equity markets are priced for too much hope, high yield bond markets for too much growth, and all asset prices elevated to artificial levels that only a model driven, historically biased investor would believe could lead to returns resembling the past six years, or the decades predating Lehman."
Bill Gross

The chart illustrates that the three-year rolling correlation between gold and the S&P 500 Index (SPX) is subject to considerable fluctuations over time and does not follow a uniform trend. However, it can also be discerned that prior to recessions (marked by gray bars on the chart), the correlation tends to become tighter. Usually, a local maximum is reached during the recession period.

Awareness of this fact can be very helpful in evaluating a given situation, as gold and the SPX regularly tend to exhibit a weak, but closer correlation just before recessions begin. At the beginning of 2017 we can once again detect a local maximum that has gone hand in hand with very weak US GDP growth.

The performance of gold and the US dollar during bear markets in stocks is quite interesting as well (with bear markets defined as periods with a maximum loss of > -20%). The following table shows the performance of gold and the dollar index during maximum drawdowns in the S&P 500 Index exceeding 20%.

[132] Three year rolling correlation means that one starts with a three-year correlation, and once one arrives at the end of year four, year one is dropped from the calculation and replaced by year four, then year two is replaced by year five, and so forth.

Performance of gold and dollar index during maximum drawdowns in the S&P 500 Index exceeding 20%

Period	Max Drawdown S&P 500	Development Gold	Development USD-Index
Dec. 72 – Sept. 74	-46.2%	137.8%	-4.3&
Nov. 80 – July 82	-23.8%	-45.8%	24.0%
Aug. 86 – Nov. 87	-30.2%	14.5%	-6.9%
Mar. 00 – Sept. 02	-46.3&	16.1%	1.0%
Oct. 07 – Feb. 09	-52.6%	24.6%	12.3%

Source: FRED, Bloomberg, Yahoo Finance, Incrementum AG

The table shows that in periods of SPX drawdowns exceeding 20%, gold has in the past tended to move in the opposite direction, often rallying quite significantly. The only exception was the period of November 1980 to July 1982. The performance of the US dollar is quite interesting in this context as well. Let us look more closely at the individual time periods:

• **From December 1972 until September 1974,** the after-shocks of the demise of the Bretton-Woods system continued to have a significant impact, leading to a veritable price explosion in gold and a notable devaluation of the dollar index.

• **In the stock bear market from November 1980 to July 1982** the dollar by contrast rallied substantially, while gold was dumped rather indiscriminately. This move was however largely due to the contingent circumstances prevailing at the time. Not only did the gold price come off a major blow-off peak it reached in 1980, partly driven by fears of price inflation, but also by a major panic over geopolitical developments (the Soviet invasion of Afghanistan and the Iranian revolution), but Paul Volcker continued the restrictive monetary policy begun by his predecessor in order to restore faith in the US dollar. This put pressure on the gold price, which was clearly overvalued at the time. By 1980, growth in the true US money supply had been trending down for more than three years, and in 1981 it even turned briefly negative (by a barely perceptible low amount of slightly more than 1%) – which was only the second time in the history of the Fed when the central bank deliberately pushed money supply growth into negative territory, however briefly. Just one year later, in 1982, true money supply growth exploded again, by an until then unheard-of rate of 50% year-on-year. Paul Volcker pursued a tight monetary policy for precisely as long as it took to bring inflation expectations down – as soon as that goal was achieved, the spigot was opened wide again.

• **The situation around the Black Monday was different** – it was accompanied by a weakening dollar, while gold was able to generate a significant gain of 14.5%.

• **The demise of the "New Economy" mania and the financial market crisis of 2008** were characterized by a strengthening US dollar and a concurrent rally in gold prices, whereby it is worth stressing that the performance of the gold price far exceeded the appreciation of the US dollar (note that there was considerable short term volatility in evidence, particularly in 2008, with gold

initially selling off at the height of the panic. As mentioned further above, it served as a source of liquidity. Moreover, its price was pressured by a bout of forced liquidation of futures positions held by hedge funds that faced margin calls in unrelated positions in other markets).

"Until gold can start to out-perform equities, there is little incentive for fund managers and asset allocators to pile in. That's important because investment demand is typically the swing factor."
Charlie Morris

In conclusion, it can be stated that gold is eminently suitable as a hedge when the stock market comes under pressure, as it does as a rule offset stock market declines quite smartly. Localized crisis situations, which affect the US only indirectly, by contrast tend to lead to strength in the US dollar. This also tends to apply in global crises, when investors prefer to shift funds into safe haven assets, however, in such situations gold tends to markedly outperform the US dollar, as *inter alia* demonstrated quite clearly by the financial market crisis of 2008-2009. Ultimately this has to do with the fact that the dollar is nothing but a fiat currency. When push comes to shove, it cannot be ruled out that market participants will lose confidence in its qualities as a medium of exchange and a store of value. **Once this confidence is lost, paper money has a habit of returning to its true value, which is to say, the value generally accorded to pieces of paper with some ink slapped on them.**

e. Long Term Studies of The Purchasing Power of Gold

"In reality, there is no such thing as an inflation of prices, relative to gold. There is such a thing as a depreciated paper currency."
Lysander Spooner

A progressing economy becomes ever more productive and efficient. In a healthy, sound monetary system the majority of prices would therefore steadily decline. Today, the exact opposite is the case. What changes all the time is the purchasing power of paper money. It declines year after year, while the bulk of the working population is faced with stagnating or even declining real incomes. By contrast, gold has been a success story as a means to store value and preserve purchasing power for thousands of years. The market has chosen it as optimally suited to fulfill the role of money in the past millennia for logical and rational reasons – e.g. high marketability, indestructibility, high value density, fungibility, easy divisibility, worldwide acceptance. **These unique characteristics make gold one of the best hedges against excessive money supply expansion.**

In this section, we will therefore – as in previous years – take a look at the trend in gold's purchasing power in recent decades relative to a number of important goods and services. Our point of departure is the pre-war era of the late 1930s. The presentation references the movie The Notebook[133], which looks back at this era[134].

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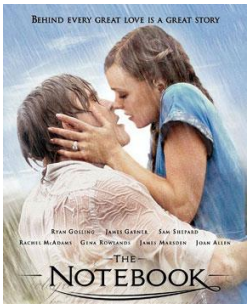
[133] The movie plays in the early 21st century and tells the story of Noah (Ryan Gosling) and Allie (Rachel McAdams). She is in a nursing home suffering from senile dementia and he reads a story to her about their first meeting and how they fell in love in the late 1930s and early 1940s. More information and a plot summary can be found under this link: http://www.imdb.com/title/tt0332280/
[134] See also Goldmoney - https://wealth.goldmoney.com/research/goldmoney-insights/savingstech-back-to-the-future-edition

The Long-Term Price Trend of Stamps

An interesting object of study is the price trend of stamps. The services offered by the state-owned US Postal Service are not only plagued by inflation in dollar terms. If one examines how many stamps an ounce of gold would have bought in the course of time, the inflation of stamp prices becomes particularly glaring.

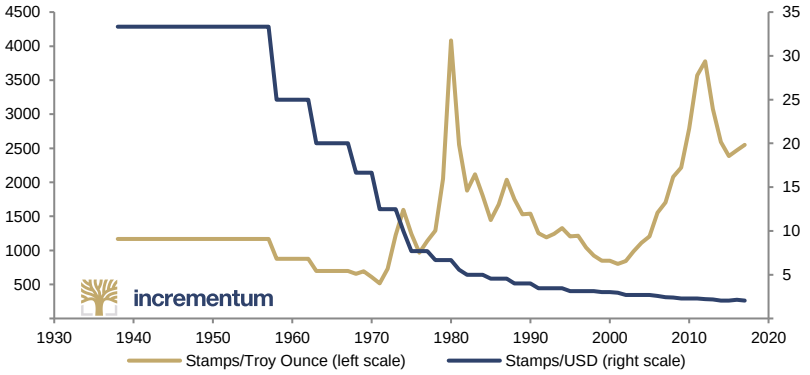


In the Movie "The Notebook", the story of which starts out in the 1930s, Noah (Ryan Gosling) sends a letter every day to his beloved Allie (Rachel McAdams), whom he has met and fallen in love with during a summer vacation. In the 1930s he was able to buy 33 stamps with one US dollar. In other words, Noah had to spend around 11 US dollars per year to mail all 365 letters. If Noah were to try this in 2017, he would have to spend more than 182 US dollars to buy the same number of stamps. In terms of US dollars that represents a 17-fold price increase in approximately 80 years.

If he had kept some of his savings in gold, he would have needed less than a third of a troy ounce of gold in the late 1930s to be able to mail one letter per day for an entire year. Today he would need less than one sixth of a troy ounce of gold to mail the same number of letters, in other words, approximately half as much gold as he would have needed 80 years ago. **The purchasing power of gold relative to stamps has more than doubled in the course of eight decades, while the purchasing power of the US dollar relative to stamps has fallen to less than one sixteenth over the same time span.**

The following chart illustrates both trends – the number of stamps per US dollar and the number of stamps per troy ounce of gold.

Stamps / troy ounce of gold (left) vs. stamps / US dollar (right)



Source: United States Postal Service, Measuring Worth, Incrementum AG

The Price of a Bottle of Coca-Cola in Gold Terms

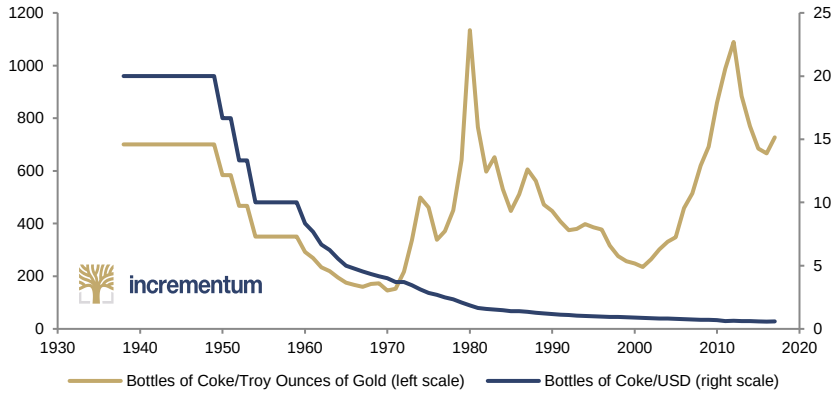
"Diminution in the dollar's value was so slow there seemed no cause for public alarm. It was like watching an ice cube melt. It happens, yet slowly."
Jim Rickards

From its introduction in 1886 until the 1950s the price of a bottle of Coca-Cola was fixed at 0.05 US dollars. There is a curious story relative to this context. Robert Woodruff, the former CEO of Coca Cola, used his good connections to his friend President Dwight Eisenhower in an attempt to persuade him to mint a 7.5 US cents coin. The idea was that the higher price of a bottle of Coke should continue to be reflected by a single coin, as had been the case with the nickel (5 c.) for more than seven decades.

"Wherever you go, there are three icons that everyone knows: Jesus Christ, Pele and Coca-Cola."
Pele

To cut a long story short: the price of a bottle of Coca-Cola has been adjusted upward many times since then, which had different effects on the purchasing power of gold and the US dollar relative to bottles of Coke as the following chart illustrates:

Bottles of Coke / troy ounce of gold vs. bottles of Coke /US-dollar



Source: US Bureau of Labor Statistics, Measuring Worth (http://measuringworth.com), Numbeo (www.numbeo.com), Incrementum AG

"Never have the world's moneys been so long cut off from their metallic roots."
Murray N. Rothbard

Viewed through the lens of the "The Notebook", we can state that Noah, back when he first met Allie in that magical summer in the late 1930s, would have been able to buy 20 bottles of Coke with one dollar, while he would need more than a dollar to buy even a single bottle of Coke today.

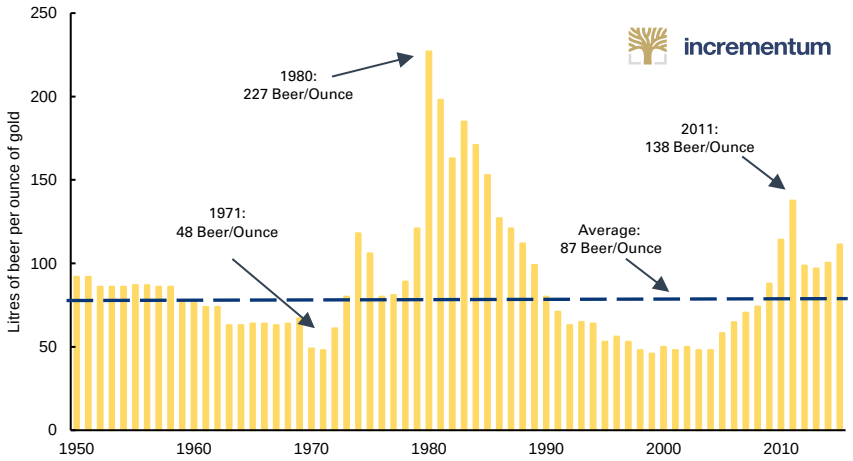
By contrast, in gold terms his purchasing power would have remained stable at slightly more than 700 bottles of Coke per troy ounce. At today's prices, he would actually receive 726 bottles compared to 700 bottles in the late 1930s. Noah's purchasing power with respect to Coca-Cola would have remained quite stable had he kept his savings in gold. **Had he saved US dollars, the purchasing power of his money with respect to Coke would have declined to 1/33 of what it once was eighty years ago.**

"A woman is like beer. They look good, they smell good, and you'd step over your own mother just to get one!"
Homer Simpson

A traditional fixture of our Gold report is a look at the "beer purchasing power" of gold. While a liter of beer (a "Maß" in German) at the Munich Oktoberfest in 1950 cost the equivalent of EUR 0.82, the average price in

2016 was EUR 10.55[135] .The annual price inflation of beer since 1950 thus amounts to 4.2%. If one looks at the price of beer relative to the gold price, then one ounce of gold could buy 111 liters of beer in 2016. Historically the average is 87 liters – thus the "beer purchasing power" of gold is currently slightly above the long-term average. The peak was however reached in 1980 at 227 liters per ounce. We believe it is quite possible that similar levels will be reached again. **Beer drinking gold aficionados should therefore expect the metal's beer purchasing power to increase.**

Gold/Beer ratio: How many "Maß" beer does one ounce of gold buy at the Munich Oktoberfest?



Source: www.HaaseEwert.de, Historisches Archiv Spaten-Löwenbräu, Incrementum AG

Conclusion:

These examples illustrate that gold conserves or even increases purchasing power in the long term, while it is once again made quite clear what a massive deterioration in purchasing power fiat money has been subjected to. In his excellent introduction to the Austrian School of Economics our friend Rahim Taghizadegan writes:

"Sound money provides its users with three functions in an economical and sustainable manner: the medium of exchange function, the store of value function, and the measurement of value or standard of value function. Hitherto precious metals or instruments backed by precious metals were best suited for this purpose."

We could not agree more.

[135] Depending on the festival tent, a liter of beer did cost between 10.40 and 10.70 EUR at the 2016 Oktoberfest.

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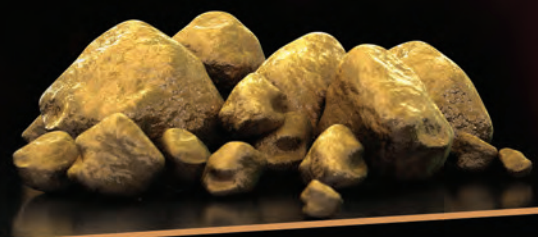
GOLD CORP

Continuing a Yukon Tradition

"Mining Gold"

building the

Eagle Gold Mine



vitgoldcorp.com

Mining Shares

Key Takeaways

- The past bear market in mining shares was the longest lasting with the most significant drawdown.
- A preview of the sector's asymmetric return potential and its greater gold price leverage was provided in the first half of last year
- From a valuation perspective, the growth rate of free cash flows, reserves per share, and earnings growth per share strike us as the most important financial metrics

"Going in one more round when you don't think you can – that's what makes all the difference in your life".

Rocky Balboa, Rocky IV

When our last gold report was published, the Gold Bugs Index (HUI) stood at 240 points. After a stunning rally of more than 180% in eight months, the sector suffered a 61.8% correction of the advance. Since the beginning of the year, the tide has turned again and the technical picture has clearly brightened. **In the following pages, we will discuss why we believe that the turnaround last year marked the end of the cyclical bear market and why the rally in the precious metals sector has probably only just begun.**

"The great financial success stories are people who had cash to buy at the bottom."
Russell Napier

To begin with we want to once again highlight the enormous volatility and inflation sensitivity of the mining sector. As the chart below illustrates, gold stocks are anything but "buy and hold" investments and should be actively managed. The following quote confirms this as well: *"Market and sector forces together typically cause 80% of the price movement in a stock. That means the company fundamentals usually account for less than 20% of a stock's price movement. This is the reason a company's stock price sometimes seems to move independently of the fundamentals"*[136]

Amex Gold Bugs Index (HUI): Bull and bear market cycles since 1995

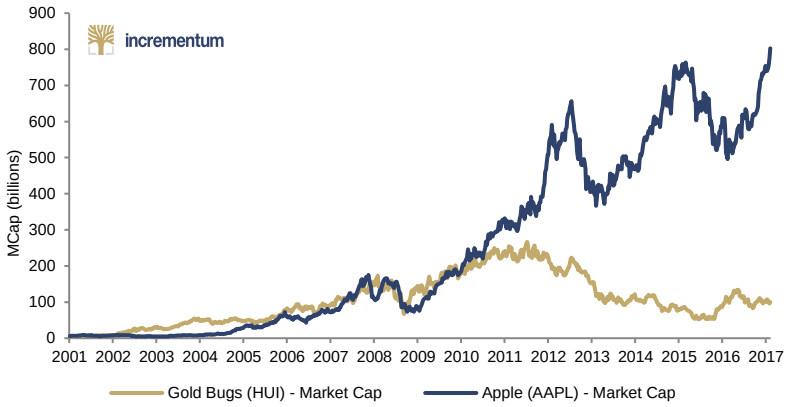
Source: Incrementum AG, Bloomberg

"Sometimes life hits you in the head with a brick. Don't lose faith."
Steve Jobs

A glance at the market capitalization of gold mining companies reveals a significant valuation discrepancy compared to other asset classes. At the moment the entire HUI, which includes the 16 largest unhedged gold producers, is valued at a mere USD 99 bn. This amount represents just 0.4% of the market capitalization of all S&P 500 Index members. The market capitalization of Apple alone exceeds that of the 16 companies in the index by 720%. **Another interesting numbers game: One could use the cash hoard of Apple (AAPL) to purchase the entire Gold Bugs Index 2.5 times over, or alternatively buy 6,500 tons of gold. If Apple did the latter, it would be the second largest gold holder in the world.**

136 "The Latent Statistical Structure of Securities Price Changes", Benjamin F. King

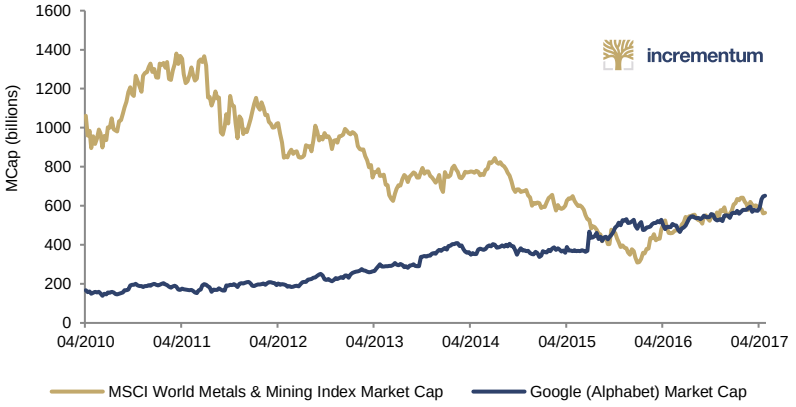
Market capitalization of the HUI vs. AAPL, in USD bn.



Source: Bloomberg, Incrementum AG

The next chart shows the market capitalization of the MSCI World Metals and Mining Index compared to that of internet giant Google (Alphabet nowadays). The index, which comprises the 39 largest mining companies in the world, as well as the broadly diversified mining houses such as BHP Billiton and Rio Tinto, currently has a lower market value than Google.

Market capitalization of the MSCI World Metals & Mining Index vs. Google (Alphabet), in USD bn.

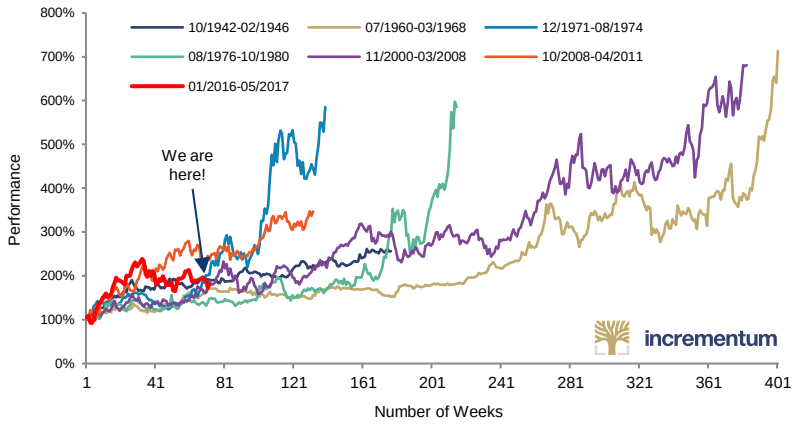


Source: Bloomberg, Incrementum AG, Dr. Torsten Dennin

If one looks at all bull markets in the Barron's Gold Mining Index (BGMI)[137], one notices that the current uptrend is still relatively modest in terms of duration and performance compared to its predecessors. Should we really be on the cusp of a pronounced uptrend in the sector – which we assume to be the case – quite a bit of upside potential would remain.

[137] The oldest existing gold mining index. Index data can be obtained at www.bgmi.us

Bull markets compared: BGMI bull markets since 1942

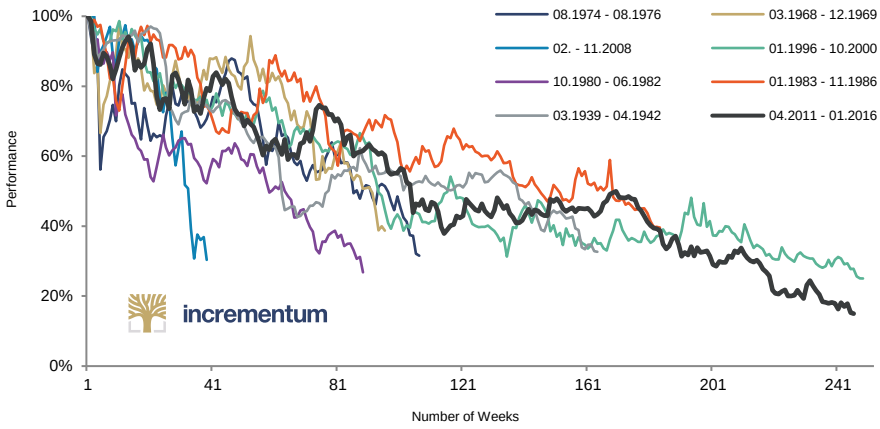


Source: Nowandfutures, TheDailyGold.com, Barrons, Incrementum AG

"A speculator is a man who observes the future, and acts before it occurs."
Bernard Baruch

Jordan Roy-Byrne, an analyst whom we greatly respect, describes the sector's status as "bearish bull". While the fundamentals of the mining sector stabilized in the 2014-2015-period, early 2016 was the time of the final capitulation. At the time, precious metals mining stocks exhibited the worst 5 and 10 year rolling performance in 90 years. During the final slump, they fell to an all-time low relative to the S&P 500 Index, and their price to book ratios stood at the lowest level in 40 years (which is as far back as the data go). The chart below also makes clear that the preceding bear market was an historically unique event.[138]

Bear markets compared: BGMI bear markets since 1942



Source: Nowandfutures, TheDailyGold.com, Barrons, Incrementum AG

Looking at gold mining stocks in comparison to the broad market, it becomes evident that the gold sector has been viewed with extreme skepticism since 2011. Currently the ratio stands at the same level as in 2001, when gold was trading at USD 300/oz. and the great bull market had just begun. Should the 20 year weekly high in the ratio established in 2011 be reached again, the XAU Index would have to rise to 460 points, *ceteris paribus*. That would be equivalent to a gain of more than 370%[139]. Even though such figures may appear

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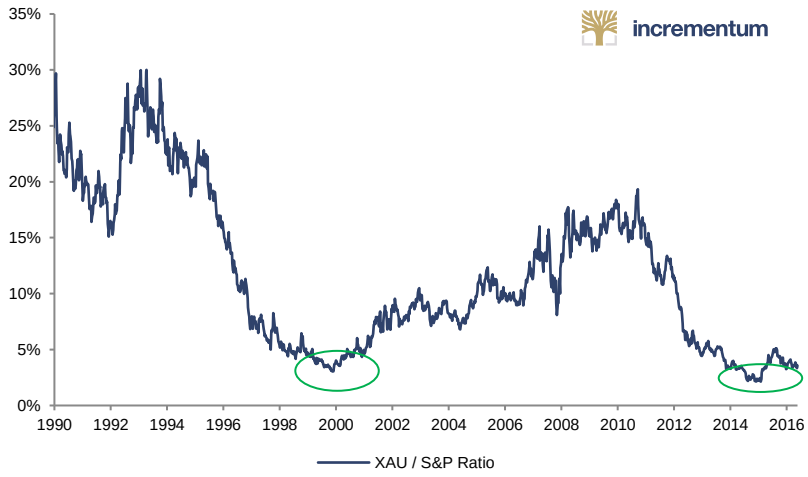
[138] See "The Bearish Bull", Jordan Roy-Byrne, TheDailyGold.com
[139] Provided the S&P 500 Index remains unchanged

to strain credibility at first glance, one must keep in mind that euphoric rally phases in the precious metals sector have quite often occurred in the past. Such targets for the index are conceivable particularly in times of rising price inflation rates and a loss of confidence in the monetary system.[140]

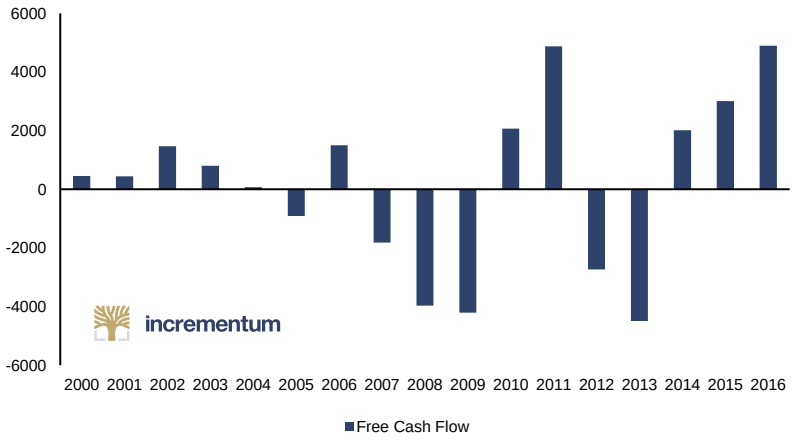
Philadelphia Gold and Silver Index (XAU)/S&P 500 ratio



Source: Bloomberg, Incrementum AG

A clearly positive trend is also detectable in terms of operating earnings. The gold industry has evidently learned to live with lower prices. **In 2012 and 2013 the component companies of the HUI index still generated significant negative cash flows. The situation brightened considerably in ensuing years. Last year the gold mining companies in the index generated free cash flows totaling USD 4.8 bn., which exceeded the previous record high of 2011.**

Free cash flows of HUI component companies (in USD mn.)



Source: Bloomberg, Incrementum AG

Despite the confidence that we have expressed with respect to gold miners, a number of factors have to be kept in mind:

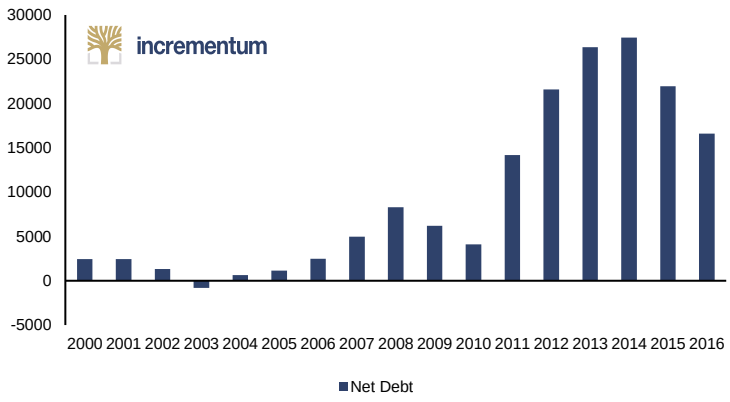
[140] Source: Ringler Research: www.mining-research.com

- Gold producers were able to lower their production costs in recent years by implementing comprehensive cost cutting measures. The decline in energy prices, which traditionally represent a significant share of mining cash costs, was undoubtedly helpful in this context. Moreover, many producers have cut their annual exploration budgets drastically. As gold reserves are steadily depleted through mining, we expect a considerable acceleration in M&A activity in coming years. We primarily expect to see takeovers of exploration and development companies in politically stable regions such as Australia and North America. This assessment was most recently confirmed by the takeover of Integra Gold by Eldorado Gold.

- Since late 2015, several senior producers have been involved in several asset swaps and sales of producing properties, in an effort to rationalize production and development, as well as to lower debt burdens in some cases. Several mergers of small to mid-sized producers were recorded as well, and larger producers started taking strategic stakes in promising exploration companies, partly farming out properties or funding ongoing exploration programs in exchange for shares. Many development projects begun in the pre-2011 boom have been de-risked by revising feasibility studies and redesigned at a smaller scale in order to bring initial capital costs down.

- Although debts have been reduced to some extent in the past few years, companies in the Amex Gold Bugs Index remain highly indebted with net debt totaling USD 16 bn.

Amex Gold Bugs Index components – net debt (in USD mn.)



Source: Bloomberg, Incrementum AG

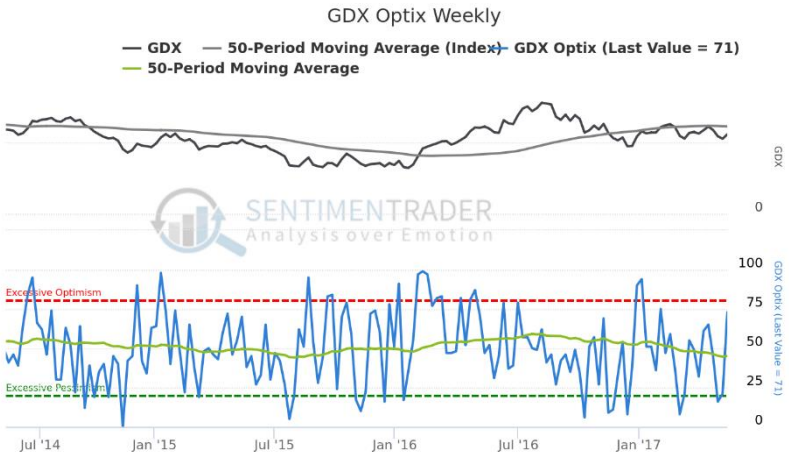
"Buying natural resources at the right time of the cycle can be extremely rewarding business. Producers tend to suffer from the triple whammy of lower prices, lower volumes, and expensive financing. A great combination for anyone with cash and hungry for resources."
Diego Parilla

- The sector's enormous capital intensity at times results in many companies posting losses even in years when gold is rallying. In order to fund these losses or pay for large acquisitions, the companies tend to issue rather generous gobs of new shares. Ironically the much-lamented central bankers may have set the example with respect to this inflationary policy. During gold booms managers of gold mining firms are as a rule sorely tempted to engage in such behavior, as often far too much money is flooding into this relatively small sector on these occasions – very much in keeping with the tenets of Austrian capital theory.

The resulting dilution of existing shareholders was a major reason for the sector's disappointing performance.

- In the short term, sentiment appears a tad over-optimistic to us. As the Optix (optimism index, a mixture of a variety of sentiment and positioning data) shown below indicates, sentiment in the GDX ETF is approaching excessive optimism territory. In line with the seasonal pattern in mining shares, a correction in the summer months may well provide a favorable entry point.

GDX Optix



Source: Sentimentrader

Conclusion:

"The great menace to the life of an industry is industrial self-complacency."
Joyce Carol Oates

We are convinced that due to their response to the four-year long bear market, the majority of gold producers rests on a more solid fundamental basis these days. Efforts to improve operations have left producers leaner, have reduced their debt burdens and ensured that they will benefit to a greater extent from a rally in gold prices. **A preview of the sector's asymmetric return potential and its greater gold price leverage was provided in the first half of last year, when gold stocks rallied by 180% while gold generated "only" a gain of 28%.**

"Gold will continue to vanish into private hoards against the day that even no metallic money will be had or seen any more...Gold mines will once again be viewed as mini-central banks."
Daniel Oliver

Our confidence is also boosted by the fact that few sectors are currently more underweighted by the investment community than mining shares. The sector's tiny market capitalization proves this assessment indirectly. Thus, we expect that after a lengthy and demoralizing dry spell, mining companies and their long-suffering shareholders will finally reap the rewards for their patience. **The industry must continue to deliver on the promises made in recent years and keep working on rebuilding investor confidence.**

We remain firmly convinced that the large valuation discount at which gold stocks trade relative to the broader market is going to narrow over the long term. For contrarian investors, the precious metals sector represents an attractive niche offering an excellent risk/reward profile over coming years.

The focus should be on conservatively managed companies which are not merely pursuing an agenda of growth at any price, but are instead prioritizing shareholder interests. From a valuation perspective, the growth rate of free cash flows, reserves per share, and earnings growth per share strike us as the most important financial metrics. Often these have to be assessed over somewhat broader time frames than the quarterly song and dance that seems so (needlessly) relevant to other sectors, as the mining business is subject to relatively wide fluctuations based on seasonal factors, mine sequencing, capex cycles, and so forth. One should try to avoid investing in companies with a habit of incessantly diluting their shareholders by flooding the market with new share issues, particularly if one aims to hedge oneself against the inflationary policies of central banks.

"Put not your trust in money, but put your money in trust."
Oliver Wendell Homes Sr.

In our investment process, we are currently focused on developers and emerging producers. Based on the premise that the bull market in gold has resumed, we expect the gold-silver ratio to decline over the medium term from its current elevated level. **In such a scenario, particularly promising investment opportunities should emerge in the stocks of silver mining companies**.

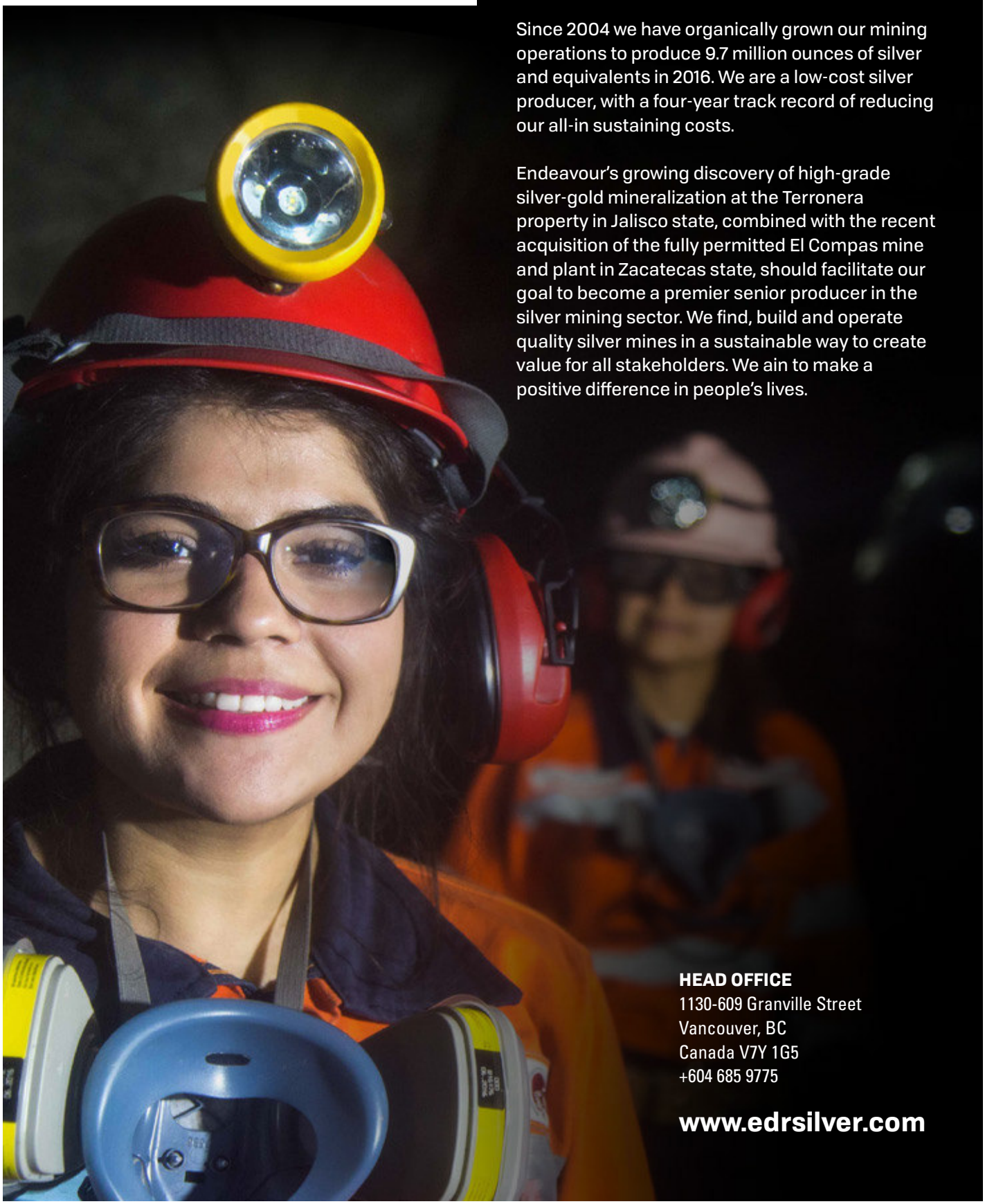
Endeavour SILVER

NYSE: EXK | TSX: EDR | FSE: EJD

Endeavour Silver Corp. is a mid-tier precious metals mining company that owns and operates three high-grade, underground, silver-gold mines in Mexico: the Guanaceví mine in Durango state, and the Bolañitos and El Cubo mines in Guanajuato state.

Since 2004 we have organically grown our mining operations to produce 9.7 million ounces of silver and equivalents in 2016. We are a low-cost silver producer, with a four-year track record of reducing our all-in sustaining costs.

Endeavour's growing discovery of high-grade silver-gold mineralization at the Terronera property in Jalisco state, combined with the recent acquisition of the fully permitted El Compas mine and plant in Zacatecas state, should facilitate our goal to become a premier senior producer in the silver mining sector. We find, build and operate quality silver mines in a sustainable way to create value for all stakeholders. We ain to make a positive difference in people's lives.



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Technical Analysis

Key Takeaways

- The Coppock-indicator gave a buy signal in early 2015 which was confirmed at the beginning of 2017.
- Sentiment toward gold continues to oscillate between disinterest, pessimism and minimal confidence.
- Net speculative positioning in gold and silver futures at the COMEX diverged to a never before seen extent in recent weeks. The data for gold gradually improved, while positioning in silver continued to deteriorate, implying a vulnerable market.
- According to Midas Touch a final retest of the 200-day moving average in the summer would be an ideal moment to take a position in anticipation of a rally in the second half of the year. That rally could see the gold price advance to around USD 1,500 by the spring of 2018.

"The illusion of randomness gradually disappears as the skill in chart reading improves."

John Murphy

"We forget that Mr. Market is an ingenious sadist, and that he delights in torturing us in different ways."
Barton Biggs

Within the framework of a comprehensive analysis, technical analysis of the gold price definitely has to be addressed. It is important in this context to focus *exclusively* on technical conditions and market structure, and to analyze the situation objectively and independent of one's fundamental opinions. At times an analyst can arrive at an entirely different conclusion based on his analysis of the technical picture than the one he arrives at based on an analysis of fundamentals.

Last year we wrote: *"From a sentiment and futures positioning perspective we wouldn't be surprised if a short-term correction were in store. However, we don't expect a very deep correction, since it appears as though many potential buyers are waiting on the sidelines, eager to buy the dips."*

With respect to the chart picture our conclusion was: "*In December a double-bottom formed at USD 1,046, a level which we believe represents the low of the bear market. If one examines the following price chart, it can be seen that relatively little technical resistance is lying in wait up to the former major support level around USD 1,530. A rally would therefore encounter little opposition and could be relatively rapid. More specifically, a sustained move above USD 1,300 could trigger a further advance toward the USD 1,530 level."*

This assessment proved only partly correct. Although the rally extended to USD 1,375, the subsequent correction turned out to be much deeper than expected. We will analyze below whether the impulsive move in the first half of last year represented merely a dead cat bounce or the beginning of a new bull market.

For the purpose of a rough evaluation of the current situation, we will begin by looking at the Coppock curve, a very long term oriented and reliable momentum indicator.[141] A buy signal is given when the indicator turns up from below the zero line, i.e., begins to exhibit an upward slope. Its advantage is that it reliably signals large-scale trend changes. The indicator gave a buy signal in early 2015 and has gradually risen since then.[142] In the beginning of 2017, the Coppock crossed the zero-line, which confirms the bullish setup.

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[141] Specifically, two time-weighted momentum curves are added up; a long term moving average of the resulting curve represents the Coppock indicator. We use a slightly modified version of the Coppock indicator with longer periodicities.
[142] See also "Gold Sector Update – What Stance is Appropriate", www.acting-man.com

Gold and the Coppock curve since 1998

Source: Bloomberg, Incrementum AG

a. Sentiment

"Gold remains the asset that Wall Street loves to hate."
www.acting-man.com

Sentiment toward gold continues to oscillate between disinterest, pessimism and minimal confidence. According to Bloomberg, the analyst consensus is calling for a price of USD 1,244 by the end of 2017. Thereafter a rally to USD 1,336 until 2020 is expected, which is *de facto* equivalent to a sideways move. That would be an outcome that appears exceedingly unlikely, as anyone with even a shred of knowledge about market cycles will immediately realize. However, it should also be noted that not one of the nearly 40 analysts taking part in the survey expects a long term price target below USD 1,000. From a contrarian perspective that is definitely cause for concern.

Bloomberg: Analyst consensus for gold and silver: Q2 2017 – 2020

	Sent.	Spot	Q2 17	Q3 17	Q4 17	Q1 18	2017	2018	2019	2020
1) Gold $/t oz		1224	1236	1224	1228	1234	1227	1242	1268	1292
Forecast (Median)			1250	1248	1233	1270	1244	1273	1300	1336
Diff (Median - Curr)			+14	+24	+4	+36	+17	+32	+32	+44
2) Silver $/t oz		16.39	16.76	16.26	16.38	16.48	16.71	16.64	17.02	17.46
Forecast (Median)			17.75	17.75	17.67	18.50	17.70	18.50	19.25	20.00
Diff (Median - Curr)			+0.99	+1.49	+1.30	+2.02	+0.99	+1.86	+2.23	+2.54

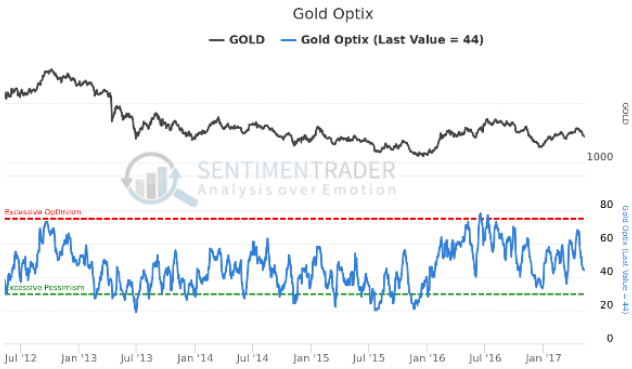
Source: Bloomberg

"The one who follows the crowd will usually get no further than the crowd. The one who walks alone, is likely to find himself in places no one has ever been."
Albert Einstein

One of our favorite sentiment indicators is the Optix Index calculated by sentimentrader. It includes popular sentiment survey data as well as futures and options positioning data. Like most sentiment indicators[143] is has to be interpreted as a contrarian indicator, i.e., excessive optimism is considered a negative factor, while excessive pessimism is actually positive. As the chart illustrates, in the summer of last year optimism was already quite pronounced. In recent months, it has retreated significantly and currently stands close to levels that often coincided with good buying opportunities in the past.

[143] Note: not every sentiment indicator is contrarian in nature – there are exceptions that work as confirming indicators, particularly when their message diverges from that sent by their contrarian brethren. Examples for confirming indicators are the OEX put/call volume and open interest ratios.

Gold Optix-Indikator and the gold price since 2012



Source: sentimentrader.com

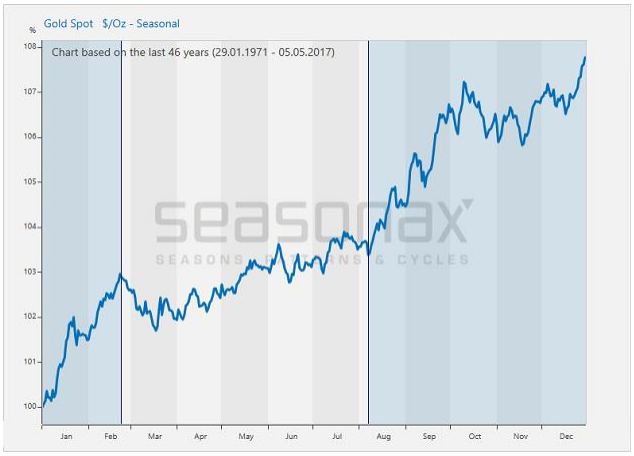
The combination of relatively subdued interest on the part of investors and the uninspired price targets favored by analysts in our opinion creates a solid basis for a continuation of the rally.

b. Seasonality

"Your best work involves timing. If someone wrote the best hip hop song of all time in the Middle Ages, he had bad timing."
Scott Adams

We already discussed gold's pronounced seasonal patterns in previous reports. As the long term seasonal chart below illustrates, gold prices typically rise from early August to the end of February. The vast bulk of gold's 7.5% average annual price gain is generated in this time period. By contrast, the seasonal return generated in the remaining 167 days from 21 February until August 6 amounted to a negligible 0.30%.

Gold price in USD terms, seasonal pattern over the past 46 years[144]



Source: www.seasonax.com

[144] Seasonal charts and interpretations were provided to us by Dimitri Speck, the founder of Seasonax. Seasonax is an app for Bloomberg and Thomson Reuters Eikon users for seasonality, event studies and intraday order optimization. Seaonax offers all readers of our gold report who register until June 14, not only a free one-month trial period, but in addition a three month money back guarantee: www.seasonax.com/#trial

"The early bird gets the worm, but the second mouse gets the cheese."
Willie Nelson

What about the seasonal trend in silver though? Silver and gold are strongly correlated, which suggests that their seasonal patterns probably look similar. But is that actually the case?

Silver price in USD terms, seasonal pattern over the past 46 years

Source: www.seasonax.com

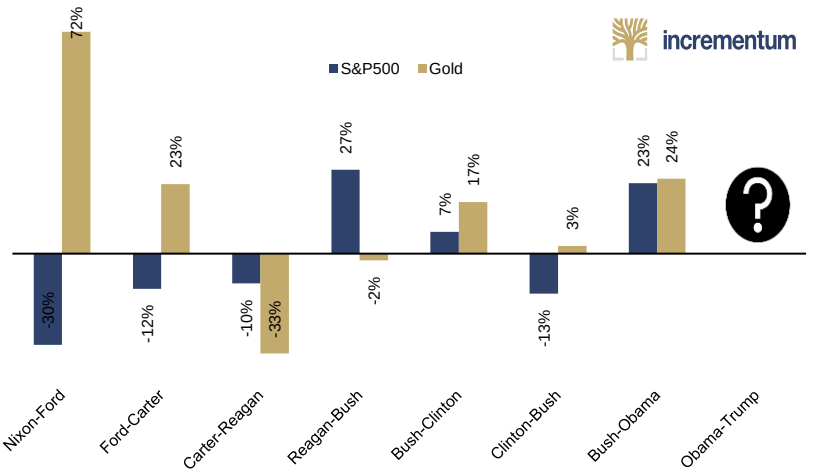
As one can see, the seasonal price trend of silver through the year is completely different from that of gold. Silver typically rises rapidly at the beginning of the year. It has done so in 30 out of the past 46 years. **The average gains from the beginning of the year until February 19 was 9.78% - generating a return exceeding that of entire year in just 26 trading days.** The largest gain posted in this time span over the past 46 years amounted to 47.35%. In the remaining 10 months' silver on average tended to lose ground.

What is the reason for this seasonal pattern? Silver demand has a large industrial component. Industrial demand is the dominant driver of the metal's seasonal price trends. The timing is probably because many industrial users tend to place their buy orders early in the new financial year, once they have finalized the review of the previous financial year and their planning for the new year.

Let us now analyze the seasonality of the gold price in the framework of the US presidential cycle. Since Richard Nixon ended the Bretton Woods System, there were seven transitional years overall (from Republican to Democratic administrations and vice versa). Looking at the performance in these years, the result is quite positive with gains of 14.8% (compared to 8.4% annualized between 1974 to 2016). Of interest, is that the S&P 500 Index significantly underperformed in these years, generating a loss of 0.9% compared to an overall average annualized gain of 9%.[145]

[145] See: "Gold in Presidential Transition Years", Merk Investments LLC

Gold and the S&P 500 Index in presidential transition years



Source: Merk Investments, Incrementum AG

c. Excursus: The Midas-Touch Gold Model[146]

Gold – a divisive topic. It is a fact that the subject of gold stirs deep emotions. After 5,000 years of conditioning, faith in gold is deeply-rooted. From a perfectly sober perspective, it is merely a metal the price of which is determined by around-the-clock trading.

In times of printing presses are running hot and negative interest rates, investors cannot afford to ignore precious metals as an asset class. Human history is brimming with currency collapses and economic catastrophes. **Gold survived all of them.**

"Cash combined with courage in a time of crisis is priceless."
Warren Buffett

However, one shouldn't be guided by one's emotions, but rather rely on methods that provide clear and simple signals. Moreover, precious metals are one of the most difficult and non-transparent asset classes. Although numerous fundamental reasons suggested that gold prices should have risen between 2011 – 2016, the metal's price declined by 45% in USD terms. **The fact that a higher low was put in at USD 1,123 in December 2016 compared to the bear market low of USD 1,046 in December 2015, suggests that the trend has turned up again**.

The Midas Touch Gold Model represents a holistic approach to analyzing the gold market. Its goal is to analyze the market rationally from as many independent perspectives as possible and to derive simple short- to medium-term signals from the data. Although the model is based on a great variety of underlying data, it is suitable for drawing up a comprehensive, compact and lucid analysis relatively quickly.

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146 We want to thank our friend Florian Grummes for contributing this Excursus. Florian is the founder and managing director of Midas Touch Consulting (www.goldnewsletter.de). Our readers can obtain free updates as well as the associated newsletter at the following link: http://bit.ly/1EUdt2K

What exactly does the model entail? The first component, a trend following indicator based on the monthly chart, gave a sell signal in mid November 2016. That represents a major obstacle to a gold bull market, and it will likely take more time to overcome it. With trend following indicators based on weekly and daily charts, the model zooms in on shorter term trends. Next it analyzes volatility. Rising volatility primarily occurs in downtrends, while upward trends are most of the time associated with low volatility. The underlying formula mainly focuses on the prevailing price trend and the rising or falling volatility accompanying it. Currently volatility is extremely low and not very informative.

CoT and sentiment data are two contrarian counter-cyclical signals that are integrated into the model. Commercial hedgers currently still hold an historically quite large net short position, but overall, pessimism predominates slightly in the gold market. The best entry opportunities occur in an extremely pessimistic or panicked environment.

Ratios and changes in ETF bullion holdings

Next a number of ratios are integrated in the model. Apart from classical ratios such as the Dow/gold ratio and the gold/silver ratio, it also includes the gold/oil ratio as well as the ratio of gold vs. other commodities. When gold clearly outperforms other commodities, it is likely driven by safe haven demand. On these occasions very steep, irrational price spikes can often be observed. The model moreover analyses changes in the bullion holdings of the largest and most important gold ETF, SPDR gold shares (GLD), on a weekly basis as a proxy for investment demand.

Multipolar Gold World

In addition, the model includes two trend following signals tied to the gold price trend in terms of the Chinese yuan and the Indian rupee: Together China and India now represent more than 50% of global physical gold demand. Gold mining shares are naturally part of the model as well. A trend following signal based on the price chart of the gold mining ETF GDX as well as the associated sentiment is used for this purpose. Gold stocks often tend to lead the gold price (currently they are underperforming). Lastly, the model is rounded out by the performance of the US dollar and the associated futures market positioning data, as well as the trend in US real interest rates.

Midas Touch Gold Model™ as of 27 May 2017

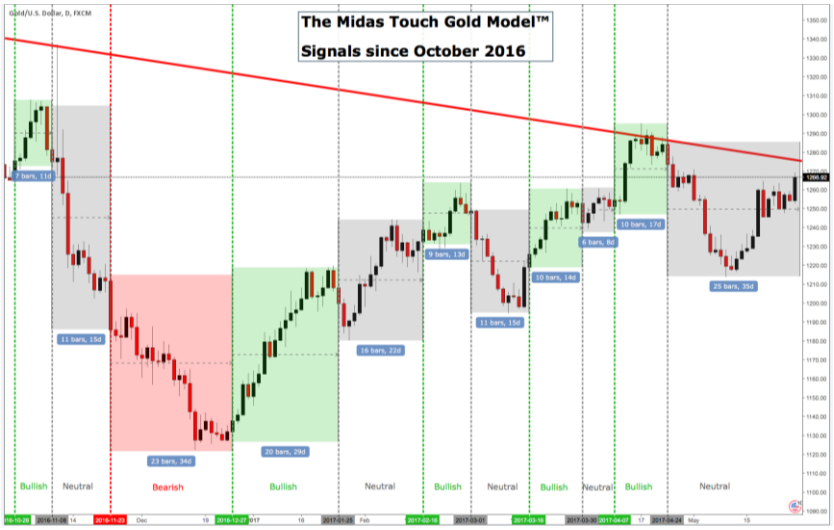
Gold USD - Monthly Chart	$1,266.70	Sell Signal 11/14/16, reversal @ $1,320.20			Bearish
Gold USD - Weekly Chart	$1,266.70	Sell Signal 05/05/17, reversal @ $1,285.72			Bearish
Gold USD - Daily Chart	$1,266.70	Buy Signal 05/15/17, reversal @ $1,239.97	Bullish		
Gold Volatility CBOE Index	11.59	Volatilty extremely low, divergences setting up		Neutral	
Gold CoT-Report	-174,291	Commercial short position too high			Bearish
Gold Sentiment	57	Sentiment neutral		Neutral	
Gold Seasonality	June	Statistically -0.351%, seasonality negative until early July			Bearish
Ratio DowJones/Gold	16.62	Sell Signal 11/25/16, reversal @ 13.47			Bearish
Ratio Gold/Silver	73.20	Sell Signal 03/10/17, reversal @ 69.48			Bearish
Ratio Gold/Oil	25.46	Buy Signal 03/08/17, reversal @ 23.60	Bullish		
Ratio Gold/Commodities (GNX)	3.28	Buy Signal 02/24/17, reversal @ 3.21	Bullish		
SPDR Gold Trust Holdings (GLD)	847.45t	minus 4.44t during last week			Bearish
Gold in $, €, £, ¥	3 out of 4	Gold up against $, £ & ¥, down against € over 1 month		Neutral	
Gold in Indian Rupee	81,698₹	Buy Signal 05/17/17, reversal @ 79,375.0	Bullish		
Gold in Chinese Yuan	8,684.5¥	Buy Signal 05/17/17, reversal @ 8,471.2¥	Bullish		
GDX Goldminers - Daily Chart	$22.94	Buy Signal 05/11/17, reversal @ $22.20	Bullish		
GDX Goldminers Sentiment	58	Sentiment neutral		Neutral	
US-Dollar - Daily Chart	97.36	Buy Signal 05/16/17, reversal @ 98.40	Bullish		
US-Dollar CoT-Report	-37,302	Commercials still short on US-Dollar	Bullish		
US Real Interest Rate	-0.908%	3-month T-bill yield (0.94%) - change in the CPI (1.848%)	Bullish		

Gold Model is in Neutral/Sideways Mode since 24th of April 2017

Source: Midas Touch Consulting, Florian Grummes

All in all, the Model has served as an excellent guideline to date. At the end of December 2016, it gave a buy signal that was rescinded ahead of the brief correction in early March. In mid-March the model turned bullish again and has been in neutral mode since 24 April.

The gold price vs. Midas Touch Model signals



Source: Midas Touch Consulting, Florian Grummes, tradingview.com

From a pure price chart perspective, the gold price was once again rejected by its six year long downtrend line. There is a small gap near USD 1,285 though, which should attract prices like a magnet in the medium term. The situation could remain unsettling until the summer though, particularly if the gold price tests the lower boundary of the symmetrical triangle again (shown below). **It is definitely possible that prices will dip below the USD 1,200 level again**.

Weekly Gold chart interpretation by Midas Touch

Source: Midas Touch Consulting, Florian Grummes, tradingview.com

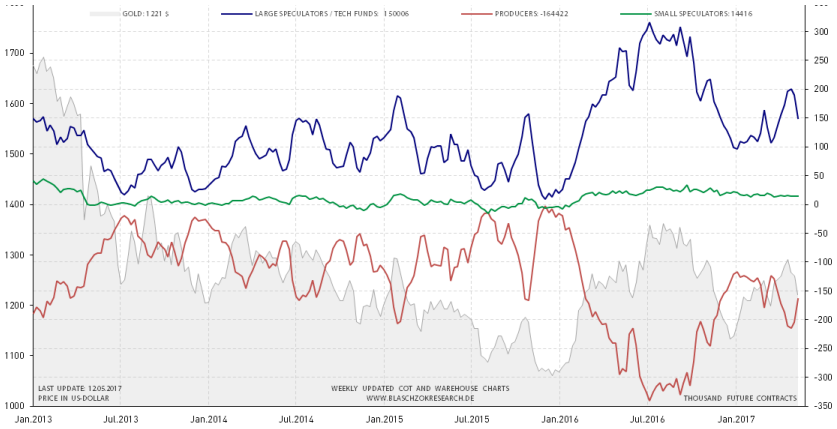
In view of a still active stochastics sell signal on the weekly chart, investors should shelve expectations of a gold price rally over the coming weeks. It seems more likely that an excellent entry point will present itself again in the mid June to early August time period. Until then gold is likely to remain range-bound between the USD 1,200 and 1,290 levels. **A final retest of the 200-day moving average in the summer would be an ideal moment to take a position in anticipation of a rally in the second half of the year. That rally could see the gold price advance to around USD 1,500 by the spring of 2018.**

End of Excursus

d. Commitment of Traders Report[147]

Net speculative positioning in gold and silver futures at the COMEX diverged to a never before seen extent in recent weeks. The data for gold gradually improved, implying potential market strength going forward, while positioning in silver continued to deteriorate, implying a vulnerable market. Following the strong rally in gold at the beginning of the year, speculators took profits, leading to a corresponding adjustment in the futures market structure. A concomitant rise in the co-basis suggested strengthening physical demand as prices corrected, an indication that continued gold price strength was well supported.

Gold: Commitment of Traders Report



Source: www.blaschzokresearch.de

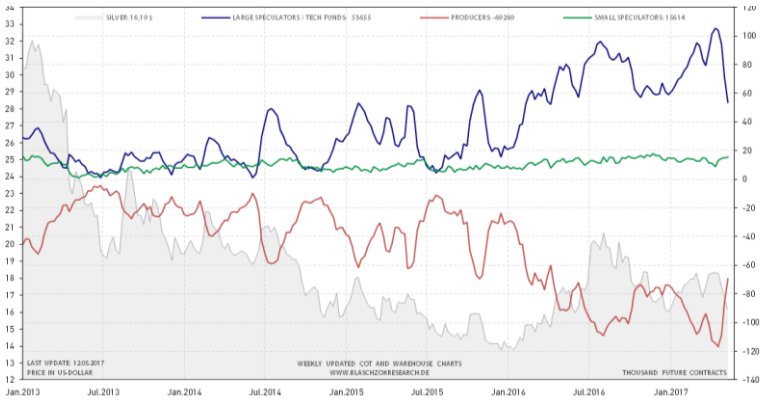
"In short, it helps to have an edge. And by definition, the mass financial media cannot give you that edge. You may think you're pretty smart by subscribing to the financial cable channel CNBC. Think again."
Tim Price

In silver, the situation was quite different. A seemingly well-supplied physical market prevented speculators from driving prices up. The rally in gold motivated more and more speculators to bet on a lagged rally in silver. Net speculative long positions grew massively and eventually reached historical record highs, which made the silver market very vulnerable to a sell-off in the short term. Ample supply in the silver market persisted and eventually a sharp price drop ensued in mid April, disappointing the bulls. The price of silver fell by $3.50 to $16 within three weeks.

As prices weakened, the net speculative position declined rapidly. Although the offsetting commercial net short position remains relatively large by historical standards, the strong liquidation in such a short period time has definitely cleared the air.

147 We want to thank Markus Blaschzok (www.blaschzokresearch.de) for providing the charts and the interpretation of the CoT reports.

Silver: Commitment of Traders Report



Source: www.blaschzokresearch.de

Conclusion of the CoT Analysis

The first four months of the year were characterized by fundamental strength in the gold market and weakness in the silver market. The decrease in speculative positions in the silver market (accompanied by a strong surge in the co-basis)[148] suggests that physical demand is now improving. Around two thirds of the needed adjustment in gold futures positioning appears to be behind us, and around half of the adjustment in silver futures. There was no complete purge of speculative net long positions usually associated with selling panics, leaving the short term outlook uncertain. It is possible that strength in gold and weakness in silver will continue. That would be quite likely in a disinflationary or deflationary environment. Should this happen, silver may well retest its 2015 lows. Gold demand by contrast appears to be robust and a retest of the late 2015 lows appears highly unlikely.

e. Conclusion of our technical assessment:

"The market is a pendulum that forever swings between unsustainable optimism and unjustified pessimism."
Benjamin Graham

Based on our analysis of the market structure, sentiment and price patterns we arrive at a positive assessment of the medium to long term outlook, and a neutral to slightly negative assessment of the short term outlook. In the futures markets, excessively large speculative positions have been reduced considerably, which should provide a basis for future market strength. The Coppock curve generated a long term buy signal at the end of 2015 and sentiment largely appears to remain skeptical.

In the coming weeks we would not expect to see much upward momentum. That is partly based on seasonality and partly on a number of technical signals which remain in bearish territory.

148 See: Keith Weiner "A Bumper Under that Silver Elevator"

Sustainable Wealth Accumulation in an Unsustainable Monetary System

Key Takeaways

- Everybody is talking about sustainability, but nobody seems to care about the non-sustainability of our monetary system.
- We are living in a house of cards made of leans whose architecture is all the more fragile it is built.
- The monetary normalization will unlikely succeed, as the basis for it – namely a sustainable economic recovery – is lacking. An ambitious increase in interest rates will inevitably lead to a new crisis. Monetary policy is caught in a zero interest rate trap.
- In our soon to be released book *The Zero Interest Rate Trap: Sustainable Wealth Accumulation in an Unsustainable Monetary System,* we thoroughly explore this problem.

"Government is the great fiction, through which everybody endeavors to live at the expense of everybody else."

Frédéric Bastiat

"Sustainability" is a term symptomatic of our times. Sustainability has advanced to an ideal, as people increasingly realize – or at least get the impression – that in many areas of modern economic life the future is plundered.

Many classical liberals (or libertarians) are skeptical about the subject of sustainability, as it has been hijacked by various ideologues, who often stand for an empty-headed critique of capitalism coupled with calls for intervention by the regulatory hand of the state. We believe it is erroneous to avoid plowing the field of sustainability altogether by simply leaving it to others.

"There is only one way to kill capitalism - by taxes, taxes, and more taxes."
Karl Marx

Although our analysis and our proposed solutions are fundamentally different, we do agree with a popular view primarily held by the political left, which regards the current economic system as anything but sustainable. **We see the reason for this in the monetary system – which in our opinion represents the epitome of non-sustainability.**

If the monetary system's survival capability and with it that of the entire economic order is questioned, activities such as saving and investing are directly affected. In our soon to be released book *The Zero Interest Rate Trap: Sustainable Wealth Accumulation in an Unsustainable Monetary System,* we thoroughly explore this problem. In the following, we provide a small foretaste. [149]

When those who argue in favor of more sustainability criticize capitalism, they implicitly refer to the economic order currently prevailing in industrialized nations. But exactly is meant when capitalism is discussed?

We will use a minimalist definition which **describes capitalism based on two characteristic features**:

- **Protection of property rights**
- **Economic activity is governed by the free market**

In such an economic order, entrepreneurs reap rewards for offering new solutions for hitherto unsatisfied needs of fellow men. **One's own situation is improved by improving that of others. There is an incentive to create new value.**

"Marge, I agree with you in theory. IN THEORY communism works. In theory."
Homer Simpson

Enriching oneself to the detriment of other people – which is what many critics of capitalism imagine entrepreneurs to be doing – has no place in a capitalist order as defined above.[150] That would be tantamount to violating property rights of others, or making profits in an environment that lacks clearly defined property rights. Such things do certainly happen. We therefore think it is crucial to stress the following two points:

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[149] This excursus is based on the first chapter of our new book, *The Zero Interest Trap - Sustainable Wealth Accumulation in an Unsustainable Monetary System*, that will be published shortly.
[150] Note: In addition, it seems noteworthy to emphasize that capitalism – unlike socialism or Marxism – is not a mental construct of ideologists but a cultural phenomenon. This is also the reason why capitalism works in practice, while all collectivist models have failed.

1. **The prevailing economic order is not equivalent to the ideal type of a capitalist economic order in line with the above definition.**
2. **Enrichment to the detriment of others can be (and often is) happening through the power of the state, or as a result of privileges accorded by lawmakers**.

The US as the blueprint for economic recovery: Can the exit from low interest rate policy succeed?

The second point is deeply embedded in our monetary system. Throughout history, people who were involved in the production of money have tried to improve their situation by counterfeiting it. Those who were engaged in mintage used to lower the percentage of the coins' purity and thus pushed the material value more and more below the nominal value. Later the banks, which originally kept the coins of their depositors and issued bank notes in return, began lending their depositors' money to others, thus putting excessive banknotes in circulation. In each case the property rights of money owners were infringed, who received less than they were entitled to or were exposed to the risk of a bank run.

"What causes poverty? Nothing. It's the original state, the default and starting point. The real question is 'What causes prosperity?'"
Per Bylund

The development culminated in the counterfeits being legalized and that banks de jure were allowed to issue much more banknotes than they held in form of deposits. By this process, new money can be can be created through the granting of loans. That enriches – at the expense of others – the recipients of these loans as well as the banks which receive interest payments for lending money that they create from nothing.

The result is a house of cards made of loans whose architecture becomes all the more fragile the higher it is built: Defaults in payment can cascade around and cause the entire construction to collapse. In order to prevent a contraction of money supply, a proactive monetary policy is required that creates permanent price inflation and growing money supply. The early recipients of new money will profit at the expense of the later ones, so debtors will be relieved at the expense of the creditors. This means that the maintenance of the credit money system, which is already based on the fact that property rights are infringed, leads to ever-increasing redistributive measures – and hence to an escalating infringement of property rights – as well as to an increasing systemic fragility as a result of the expanding amount of money.

"Markets don't have a purpose any more—they just reflect whatever central planners want them to. Why wouldn't it lead to the biggest collapse? My strategy doesn't require that I'm right about the likelihood of that scenario. Logic dictates to me that it's inevitable."
Mark Spitznagel

In 1971, the US dollar was unanchored from Gold and the modern fiat money system was born. Money supply expansion was accelerated. Price inflation was structurally depressed, which allowed for even looser monetary policy. As a result, interest rates declined. Combined with financial innovations, the expansion of money supply entered a new dimension. However, during the global financial crisis the system was close to a collapse that could only be avoided by concentrated efforts of the governments and central banks.

After the GFC, the maxim of the central banks was the same as before the crisis: An even looser monetary policy should prevent a contraction in money supply and stimulate lending. As interest rates were reduced to zero to mitigate the crisis, the arsenal of monetary policy had to be expanded, e.g. by quantitative easing. Since then, the world has obviously been caught in an exceptional monetary situation from which central banks want to escape in order to regain some leeway

to react in case of another crisis. The Fed is the first central bank which dares to tighten its monetary policy by raising interest rates step by step.

But will the exit from the low interest-rate policy really succeed? With asset prices having reached dizzy heights due to low interest rates, can markets survive the withdrawal of monetary tailwind? Can central banks normalize monetary policy without causing the next crisis? Or is the world already caught in the zero interest trap?

We believe that zero interest rates are the end of a monetary impasse. Low interest rates have a number of distorting side effects for the economy. The following graphic gives an overview.

Devastating consequences of low interest rates

Source: Incrementum AG

Conclusion

If the withdrawal from low interest rate policy is not successful, confidence in central banks around the world could crumble – a confidence which the stability of the post-Lehman economy is based on.

The above-named points make it seem rather unlikely that the monetary normalization will succeed, as the basis for it – namely a sustainable economic recovery – is lacking. An ambitious increase in interest rates will inevitably lead to a new crisis. Presumably, the Fed and other central banks will feel compelled to maintain the monetary tailwind – but this tailwind would further intensify the problems described above. Monetary policy as well as the entire financial system are therefore caught in a zero interest rate trap.

- A continuation of low interest rate policy distorts the economic structure and pushes pension funds, insurers and savers into a creeping ruin.

- A termination of low interest rate policy would mean risking a major recession/depression.

In our forthcoming book *The Zero Interest Rate Trap: Sustainable Wealth Accumulation in a Non-Sustainable Monetary System* we will not only analyze the constitution of the current monetary and financial system, but also present scenarios for the future. Moreover, we offer ideas and inspirations for how savers can succeed in sustainably accumulating wealth despite the unfavorable systemic circumstances.

Conclusion

Key Takeaways

- After years of zero interest rate policy, investors have become used to the “brave new world” bereft of fixed rate income. Gold is currently seen as “too low in calories” for yield-starved portfolios.
- The further path of the monetary normalization will be the ultimate test of the true state of the US economy and be decisive for the developments of the gold price.
- US-dollar weakness and rising commodity prices could trigger price inflation and stagflation.
- Numerous potential gray and black swan events are looming in an increasingly fragile geopolitical and economic environment.

"There are about three hundred economists in the world who are against gold, and they think that gold is a barbarous relic - and they might be right. Unfortunately, there are three billion inhabitants of the world who believe in gold."

Janos Fekete

"The optimist thinks this is the best of all possible worlds. The pessimist fears it is true."
J. Robert Oppenheimer

After years of zero interest rate policy, investors have become used to the "brave new world" bereft of fixed rate income. Stocks are increasingly held for the cash flows they generate or the dividends they pay and are widely considered to be without alternative. As surrogates for safe bonds, investment portfolios fill up with ever more illiquid real estate, which only appears to be liquid due to the miracle of securitization. Government bonds by contrast are no longer purchased for their yields, but often to speculate on further price gains. **Gold is currently seen as "too low in calories" for yield-starved portfolios**.

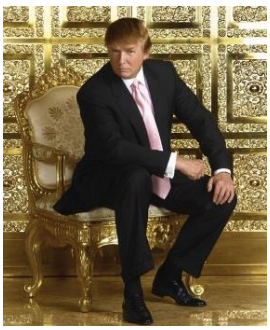
Superficially, the current situation in financial markets appears promising. According to the narrative propagated by the Federal Reserve, the recovery of the economy is steadily progressing. New record highs in stock market indexes and the decline in unemployment rates to pre-crisis levels serve as evidence for the success of current economic policy. After an extended period of extreme monetary policy interventionism, the long-promised normalization is underway. Calm has returned to China, which was seen as the economic "problem child" in recent years and not too long ago caused quite a bit of concern. Even in crisis-ridden Europe the political and economic all-clear seem to be in the air at present. Based on this picture, the prospects for financial markets appear good and low risk aversion is held to be justified.

Source: Hedgeye

We believe this perception, which is reflected in market prices and valuations, is incomplete and highly inconsistent. Most market participants seem to be dismissive of the fact that asset prices have become egregiously overvalued for the third time in less than two decades.

"There's no harm in hoping for the best as long as you are prepared for the worst."
Stephen King

Moreover, many investors appear to disregard the negative effects of rate hikes on the business cycle and they ignore that the US consumer debt has once again reached new record highs. Positioning seems to be based on the implicit assumption that the current US economic expansion will become the longest in history. Most ironic is probably the fact that they are de facto celebrating the political fall-out produced by years of misguided economic policies: the election of probably the most unpredictable US president of all time - Donald J. Trump.



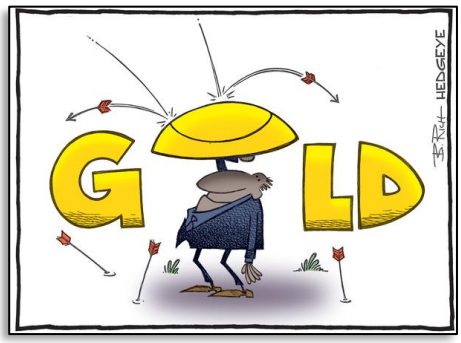
"Never underestimate the power of stupid people in large groups."
George Carlin

It may appear as though our evaluation of the economic situation is diametrically opposed to the prevailing consensus. One might well think that we are all alone with such a contrarian perspective. Up to a point that may be true, but in our experience, we are not quite as alone with our views as the current levels of asset prices may suggest. A growing number of our readers are institutional investors who share our concerns. Paradoxically, it is precisely the recent surge in asset prices that has goaded many of them into continuing to ride the financial market merry-go-round, even if their heads are spinning by now. A certain type of fear is currently rife: the fear of missing out. Many skeptics remain on the dance floor – even if they remain close to the exit. **This raises the**

question whether the exit will be big enough to accommodate all of them.

"Societal scale increases. Instability grows exponentially. Complexity breeds complexity."
Jim Rickards

One of the reasons why we are convinced that turmoil in financial markets is highly likely to strike in the not-too-distant future, is the insight that the current monetary system is not sustainable. Its design inherently results in a continuous increase in overall debt levels, which have grown at a faster pace than economic output for decades. Over-indebtedness makes the creation of additional wealth increasingly hard, and the economy becomes ever more crisis-prone as a result. The higher the levels of outstanding debt, the greater their interest rate sensitivity – we have been stuck in a zero interest rate trap for quite some time already. Although the symptoms are obvious to almost everyone, there was to date no broad public debate whatsoever regarding the need for fundamental reform of the monetary system or the international monetary order.



Source: Hedgeye

Whether one fully agrees with our critical assessment of the system is one thing; the question of whether one should hold an appropriate share of one's liquid wealth in the form of a "golden insurance reserve" is a different kettle of fish entirely. In order to make up one's mind regarding this point, it may be helpful to ask oneself a few simple questions, such as:

When will I not need any gold in my portfolio?

When...

- debt levels can be sustained or can be credibly reduced
- the threat of inflation is negligible
- real interest rates are high
- confidence in the monetary authority is (justifiably) strong
- the political environment is steady and predictable
- the geopolitical situation is stable
- governments deregulate markets, simplify tax regulations and respect civil liberties

"Our winnings will come...from the people who wake up one morning to find their savings have been devalued or bailed-in...It's going to come from the pension funds of teachers and firefighters. The irony is that when gold finally pays off, it will not be a cause for celebration."
Brent Johnson

In our opinion, the current environment speaks for itself: purchasing gold as a hedge should be the order of the day for prudent investors.

Where will the gold price go next?
Two years ago, we made a quite audacious forecast, calling for gold to reach a price target of USD 2,300 by June 2018. At the current juncture that appears unlikely to happen. Nevertheless, the long term chart suggests that gold has pulled out of its rut. We continue to believe that the second phase of its secular bull market still lies ahead. There are numerous reasons for this:

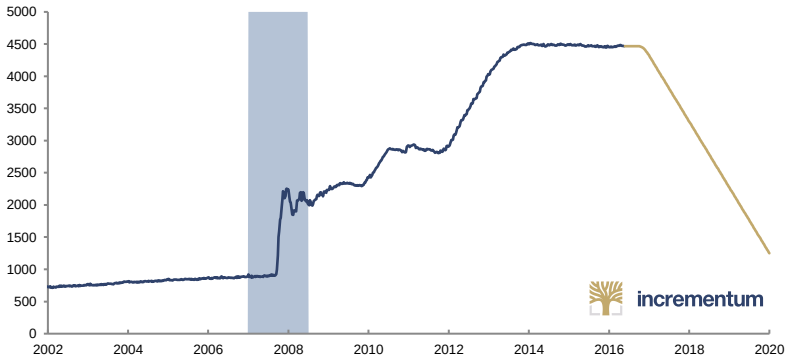
1. The next US recession inevitably approaches - only the precise timing is open to question. It is not only certain that another recession will come, it is just as certain how central banks will respond to it: by switching back to (or intensifying) expansionary monetary policy, by implementing rate cuts, renewed rounds of quantitative easing, and quite possibly some form of "helicopter money" program. Should the next recession already begin before the process of policy normalization is finalized, confidence in the measures implemented to date could well crumble to

disastrous effect. The following two criteria can be used to judge whether the Fed's monetary policy normalization effort can be considered a success:

- positive real interest rates in a range from 1 to 2 percent are established. Based on the Fed's consumer price inflation objective of 2%, this implies that **nominal interest rates should increase to around 3.5%**.

- **the Federal Reserve's balance sheet is reduced to pre-crisis levels.**

Reduction of the Federal Reserve's balance sheet – the litmus test for policy normalization



Source: St. Louis Fed, Incrementum AG

"I think gold should be part of everybody's portfolio to some degree because it diversifies your portfolio. Its alternative money."
Ray Dalio

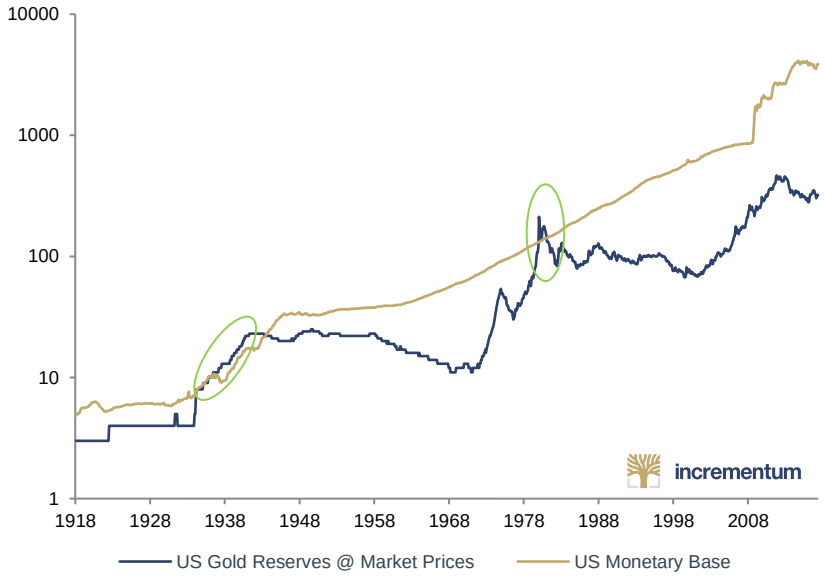
According to what has been conveyed regarding the current state of debate at the federal open market committee (FOMC), a cautious reduction of the balance sheet is to be set into motion fairly soon (initially by stopping or tapering the re-investment of proceeds from maturing bonds – no specific figures were so far released though).[151] Even if the Fed were to reduce its holdings of securities at the same pace at which it acquired them during its last QE program, i.e., if it were to reduce them by USD 85 billion per month, it would take until sometime in 2021 to shrink the monetary base to its pre-crisis level. **From our perspective, one can essentially rule out that this can be done without triggering a recession.**[152]

2. Excessive global over-indebtedness is by now glaringly obvious. That not only applies to developed countries, but to many emerging markets as well. Moreover, all sectors of the economy are afflicted by huge debt burdens. "Growing one's way out" of this mountain of debt appears essentially impossible. The easiest way out of the situation would be a significant devaluation of the US dollar (and of all other fiat currencies) against commodities, primarily against gold. In this way, outstanding debt (in fiat money terms) could be made sustainable again. **The consequence would be high price inflation rates or a stagflationary environment.** A side effect would presumably be that gold's current

—
[151] See: https://www.federalreserve.gov/monetarypolicy/files/fomcminutes20170503.pdf ; p.12
[152] **In the Fed's entire history there was only one occasion when it has deliberately allowed the money supply to shrink** (by less than 2% year-on-year under Paul Volcker in 1981). The only noteworthy episode of monetary deflation under the Fed's watch occurred at the beginning of the Great Depression in 1930-1932 but that was entirely involuntary.

undervaluation as a monetary asset relative to the total monetary base would at least decrease.

US monetary base vs. US gold reserves at market prices (log scale)



Source: Incrementum AG, St. Louis Fed

Since the end of the classical gold standard, parity between the US monetary base and US gold reserves was already restored on two occasions by an upward revaluation of gold (in the mid 1930s and in the late 1970s). Whether a potential dollar devaluation will happen in the framework of an international agreement or in an uncoordinated manner remains to be seen.

3. De-dollarization has begun. We regard this process as an uncoordinated form of dollar devaluation. Its main symptom is a gradual reduction of the US dollar's importance as a global reserve currency. If central banks want to hold a monetary asset that is liquid, stateless and above all requires no counterparty, it is not debt securities denominated in other fiat currencies, but gold that represents the only real alternative. That should become particularly obvious if or when the currently still preferred foreign exchange reserves are devalued as the associated securities held in central bank portfolios suffer price declines, and central banks come under political pressure.

4. Occurrence of a "black or gray swan" event. Numerous potential financial shocks can be envisaged in the current environment. Regardless of whether such a shock is triggered by geopolitical tensions boiling over, or by negative economic developments – an appropriate allocation to gold will mitigate the negative performance of assets that typically generate large losses in the wake of such events.

5. Based on our analysis of market structure, sentiment and price patterns, our assessment is that the medium to long term technical picture looks promising. Speculative positions in futures markets have corrected sufficiently to create a healthy basis for the advance to resume. The

Coppock curve gave a long term buy signal in late 2015, while sentiment data indicate that skepticism in the market remains quite pronounced. We expect only little upside momentum in the short term though, primarily based on seasonality, but also due to a number of signals from technical indicators that remain in bearish territory.

"There are three key biases in financial forecasting. Economists never forecast recessions, equity strategists are always bullish, and bond strategists are always bearish."
Albert Edwards

Of course, the future is always uncertain, hence we want to present several scenarios outlining potential future gold price developments. The US dollar's status as the senior global reserve currency remains (for now) a constant that is underlying all of them. That is also why we believe that economic developments in the US remain crucial for the price trend of gold. Since financial markets have fundamentally reassessed what the coming years are likely to bring in the wake of the US presidential election, we align the time-line of our scenarios with the Trump administration's term of office, which should last until early 2021. **From our perspective, the decisive factors for the gold price will be the momentum of GDP growth, as well as the further progress made in terms of the Fed's monetary policy normalization effort.**

Scenario A: "Relatively strong real economic growth"
The proposed economic policy initiatives are implemented and take hold, the US economy begins to grow strongly (>3% p.a.) and price inflation remains in an acceptable range (<3%). Monetary policy normalization succeeds. The central bank's "experiment" pays off.
The gold price should trade in a range from USD 700 to USD 1,000

Scenario B: "Muddling through continues"
Real US GDP growth and consumer price inflation remain in a range of 1-3% p.a. In this case we would not expect the gold price to enter into the second phase of the secular bull market we currently anticipate.
The gold price should remain in a range from USD 1,000 to USD 1,400 in this scenario.

Scenario C: "High inflationary growth"
Trump's economic policy initiatives are put into place, a large infrastructure spending program is launched, US economic growth accelerates significantly (>3% p.a.), but so does the consumer price inflation rate (>3%). Monetary policy normalization succeeds only partially, as real interest rates remain very low or even negative, due to the elevated consumer price inflation rate.
In this scenario, the gold price should trade in a range from around USD 1,400 to USD 2,300.

Scenario D: One of the four events listed in the table below occurs. Recession, stagflation and/or significant weakness in the US dollar push the gold price up noticeably. In the wake of another US recession and the cessation of the monetary policy normalization effort, significant changes to the global monetary order cannot be ruled out. A very large gold price rally has to be expected in such an environment.
Gold prices between USD 1,800 up to USD 5,000 appear possible in this scenario.

Term is characterized by	Growth	Monetary Normalisation	Gold price in USD
Scenario A: Genuine Boom	Real growth > 3% p.a.	Successful; Real Interest Rates >1.5%	**700-1,000**
Scenario B: Muddling Through	Growth & Inflation 1.5-3% p.a.	not completed	**1,000-1,400**
Scenario C: Inflationary Boom	Growth & Inflation > 3% p.a.	not completed	**1,400-2,300**
Scenario D: Adverse Scenario	Growth / Contraction <1.5%	Normalization paused or renewed easing	**1,800-5,000**

Source: Incrementum AG

"Gold is a currency. It always has been. It always will be."
Brent Johnson

Given the analyses presented in this year's *In Gold We Trust* report, it shouldn't be too big a surprise that we assign the highest probability to the latter two scenarios. Similar to the 1930s and the 1970s, these scenarios would be difficult to navigate, but at the same time provide quite interesting investment opportunities. **The product range of Incrementum includes strategies that are specifically tailored to these scenarios.**

"Let us not look back in anger, nor forward in fear, but around in awareness."
James Thurber

If the bull market in precious metals continues, the performance of mining stocks will be decidedly positive. Investors should continue to place their bets with conservatively managed companies in the sector, which rather than pursuing a "growth at any price" agenda are focused on delivering strong returns to shareholders. From a valuation perspective, growth in free cash flows, gold reserves/resources per share, and earnings growth per share strike us as the most important metrics.

"Security... it's simply the recognition that changes will take place and the knowledge that you're willing to deal with whatever happens."
Harry Browne

This is a sector in which one must be particularly careful to avoid getting diluted by a flood of share issuance. **The sector's small size in terms of total market capitalization is both a blessing and a curse.** A blessing because outsized price gains can be achieved in boom times, and a curse because the flood of money flowing into the sector during bull markets invariably tempts managers of gold and silver mining companies to misallocate capital as they are constantly under pressure to "do something". This danger is usually particularly pronounced in the late stages of bull markets, once everyone's memories of the hardships of the bust period of the cycle have faded. **In our investment process, we are currently focused on developers and emerging producers**. Based on the premise that the bull market in gold has resumed, we expect the gold-silver ratio to decline over the medium term. **In this scenario pure play silver mining stocks should offer particularly interesting investment opportunities**.

"Whether it's the best of times or the worst of times, it's the only time we've got."
Art Buchwald

In summary, we expect to see significant upheaval in coming years, with noticeable effects on the gold price. We will monitor events very carefully and provide commentary on a regular basis.

www.ingoldwetrust.report

Ronald-Peter Stöferle, CMT

Ronni is partner of Incrementum AG and responsible for Research and Portfolio Management.

He studied Business Administration and Finance in the USA and at the Vienna University of Economics and Business Administration, and also gained work experience at the trading desk of a bank during his studies. Upon graduation he joined the Research department of Erste Group, where he published his first "In Gold We Trust" report in 2007. Over the years, the Gold Report has proceeded to become one of the benchmark publications on gold, money, and inflation.

Since 2013 he has held the position as reader at scholarium in Vienna, and he also speaks at Wiener Börse Akademie (i.e. the Vienna Stock Exchange Academy). In 2014, he co-authored the book "Austrian School for Investors" and in 2017 "Die Nullzinsfalle" (The Zero Interest Rate Trap). Moreover, he is an advisor for Tudor Gold Corp. (TUD), a significant explorer in British Columbia's Golden Triangle.

Mark J. Valek, CAIA

Mark is partner of Incrementum AG and responsible for Portfolio Management and Research.

While working full time, Mark studied Business Administration at the Vienna University of Business Administration and has continuously worked in financial markets and asset management since 1999. Prior to the establishment of Incrementum AG, he was with Raiffeisen Capital Management for ten years, most recently as fund manager in the area of inflation protection and alternative investments. He gained entrepreneurial experience as co-founder of Philoro Edelmetalle GmbH.

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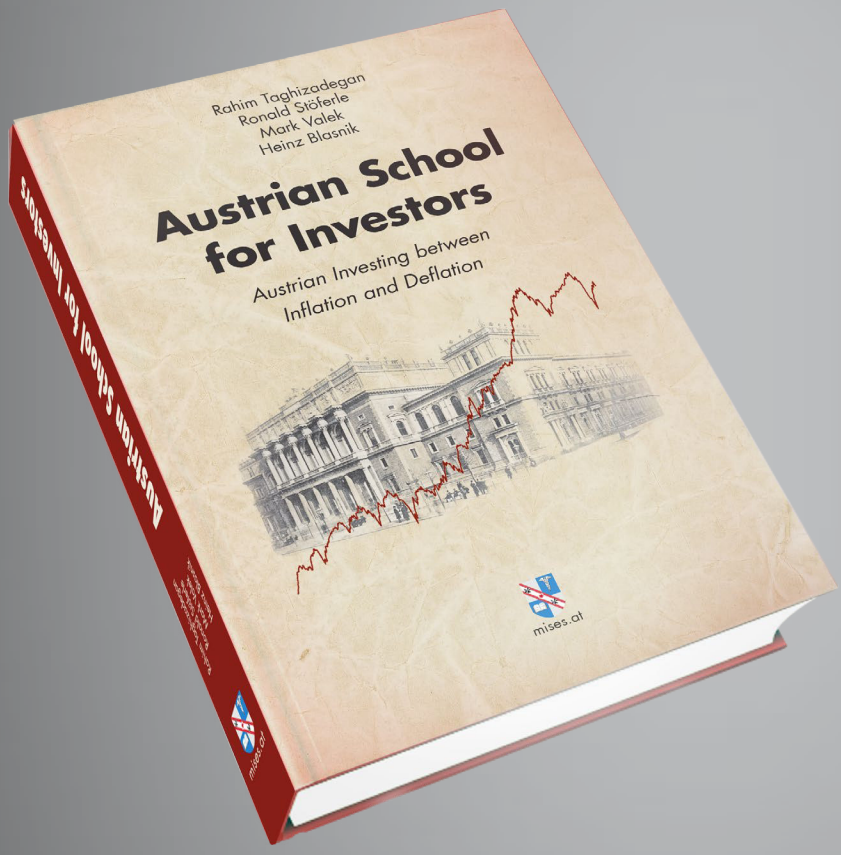
Incrementum AG

Incrementum AG is an independent investment and asset management company based in Liechtenstein. Independence and self-reliance are the cornerstones of our philosophy, which is why the four managing partners own 100% of the company. Prior to setting up Incrementum, we all worked in the investment and finance industry for years in places like Frankfurt, Madrid, Toronto, Geneva, Zurich, and Vienna.

We are very concerned about the economic developments in recent years especially with respect to the global rise in debt and extreme monetary measures taken by central banks. We are reluctant to believe that the basis of today's economy, i.e. the uncovered credit money system, is sustainable. This means that particularly when it comes to investments, acting parties should look beyond the horizon of the current monetary system. We want to re-think investment strategies and implement them in a way that is in line with today's requirements.

AUSTRIAN INVESTING

between Inflation and Deflation



The financial system is shaking. This book presents new paths through the shaky grounds between the tectonic plates of inflation and deflation to both private and professional investors. The Austrian School's approach provides the needed respite for investors caught in inflationary treadmills.

"I am grateful to the authors of this book for not only highlighting the fundamental principles of the Austrian School but also for showing how investors can make practical use of them."

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"The Austrian School's perception helps us to see long-term patterns and opportunities that today are often hidden. […] For the authors and their important work I hope for the widest possible audience of a bestseller."

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