

in **gold** we trust  
**.report**

May 29<sup>th</sup>, 2018  
Extended Version



# Gold and the Turning of the Monetary Tides



incrementum

Ronald-Peter Stoeferle  
& Mark J. Valek

We would like to express our profound gratitude  
to our premium partners for supporting the  
*In Gold we Trust* report 2018



## Table of Contents

<b>Introduction</b>	<b>4</b>
<b>Quo Vadis, Aurum?</b>	<b>12</b>
The status quo of gold in a currency context.....	13
The gold price relative to equities, bonds, and commodities.....	29
Systemic overindebtedness and inflation.....	34
Conclusion.....	42
<b>Possible Crisis Triggers and Catalysts</b>	<b>44</b>
Introduction.....	45
The fragile foundation of the financial market is showing the first cracks.....	46
US recession as crisis trigger.....	54
From QE to QT – the ultimate crisis trigger?.....	59
China – Sword of Damocles.....	64
Conclusion.....	71
<b>The Portfolio Characteristics of Gold</b>	<b>72</b>
The Role of Gold for Private Investors.....	73
The Role of Gold for Central Banks.....	77
Monetary Policy Targeting the Gold Price: An Extraordinary Idea for Extraordinary Times.....	88
Conclusion.....	93
<b>How a Tranquilized Business Cycle Helped Create the Nine-Year-Old Bull Market</b>	<b>94</b>
The Tranquilized Business Cycle.....	95
The US Stock Market Euphoria.....	102
Conclusion.....	106
<b>De-Dollarization – From the Dollar to Gold, Via the Yuan and the Euro</b>	<b>107</b>
Introduction: Hold the Horses.....	108
Ascendance of the Middle Kingdom: China's Great Strides.....	109
The Quandary: How Much Freedom to Permit?.....	114
The Comeback: Return of the Euro?.....	116
Bridging the gap: China, Europe, and Gold.....	118
Conclusion.....	121
Exclusive interview with Luke Gromen: "The dollar appears to be in Zugzwang!".....	124
<b>Inflation vs. Deflation – The Big Showdown?</b>	<b>132</b>
Efficiency-driven price deflation vs. politically induced monetary inflation: a brutal slugfest.....	133
From monetary inflation to price inflation: a long and complex process.....	134
Monetary tectonics and asset price inflation.....	136
Inflation to break out of the "comfort corridor"?.....	138
Inflation and recession.....	142
Conclusion.....	144
<b>Financial Repression – Slowly But Surely, the Screws Are Tightened Further</b>	<b>146</b>
Financial Repression: Here to Stay.....	147
Conclusion.....	154
<b>The Failure of Macroeconomics</b>	<b>155</b>
The Failure of <i>Counter-Structural</i> Policies.....	156
Conclusion.....	164
<b>Competing Currencies and Digital Money: How Hayekian Are Cryptocurrencies?</b>	<b>165</b>
The government monopoly on money – for a long time unquestioned.....	166
Hayek's Proposal of Introducing Competing Private Currencies.....	167
Cryptocurrencies – free currency competition in practice?.....	171
Conclusion.....	174
Exclusive interview with Dr. Richard Zundritsch: "Hayek would prefer gold to Bitcoin".....	175
<b>Crypto: Friend or Foe?</b>	<b>177</b>
Crypto and Gold: Related Asset Classes?.....	178
Bitcoin: A Challenge to Gold?.....	180
Gold and Bitcoin – A Fruitful Symbiosis?.....	183
Conclusion.....	186
<b>Precious Metals Shares – More Than a Silver Lining?</b>	<b>188</b>
Taking Stock.....	189
"Peak Gold": Trigger of an M&A Boom?.....	193
Excursion: Neo-Malthusians vs. Cornucopians.....	195
Gold Mining Stocks in a Broad-Based Equity Bear Market.....	201
Conclusion.....	205
<b>Technical Analysis</b>	<b>207</b>
Technical analysis.....	208
Sentiment analysis.....	210
Seasonality.....	211
Excursus: The Midas Touch Gold Model™.....	215
Technical analysis of the silver price.....	218
Conclusion.....	220
<b>Conclusion</b>	<b>221</b>
<b>About us</b>	<b>228</b>





# Introduction

*“Who is the best  
Who holds the aces  
The East  
Or the West  
This is the crap our children are  
learning  
But oh, oh, oh, the tide is turning”*

“The Tide is Turning”, Roger Waters

## Key Takeaways

- The tide is turning in monetary policy: The Fed has convinced the markets of its commitment to normalizing monetary policy by hiking interest rates and contracting its balance sheet. This is going to put the credit-induced boom at risk and will sooner or later trigger a recession.
- A turning of the tide in the global monetary architecture: “De-dollarization” efforts continue to gather pace amid growing geopolitical tensions. Gold is rediscovered as a supranational reserve asset by various central banks. A failure of monetary policy normalization or an escalation of geopolitical tensions may lead to a significant erosion of confidence in the US dollar-centric currency regime.
- A turning of the tide in technological progress: Not every cryptocurrency is destined to shine bright. However, cryptos are clearly here to stay. Gold and cryptocurrencies are actually “friends”, not “enemies” as is often asserted. This is to say, they are best viewed as complementary rather than incompatible assets.



*“To study history means submitting to chaos and nevertheless retaining faith in order and meaning.”*

**Hermann Hesse**

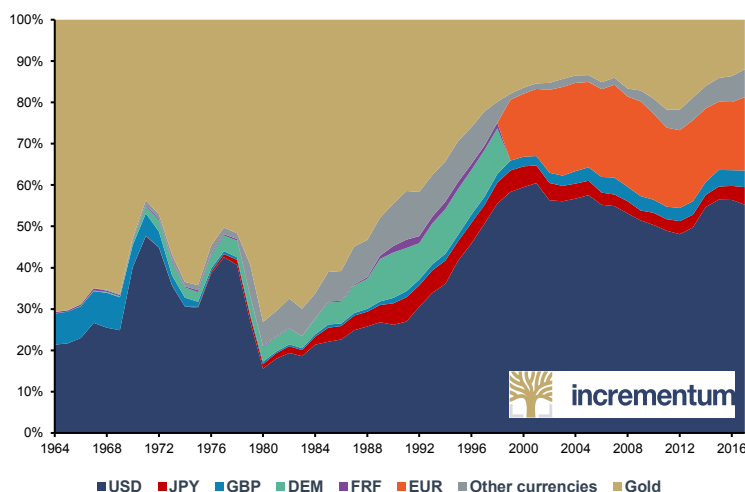
*“It costs only a few cents for the Bureau of Engraving and Printing to produce a \$100 bill, but other countries had to pony up \$100 of actual goods in order to obtain one.”*

**Barry Eichengreen**

**Much of what is currently happening right in front of our eyes provides evidence of an unfolding sea change in the global monetary order.** As the US Fed turns from monetary easing to monetary tightening, with uncertain outcomes for the global economy, investors’ trust in currencies issued by central banks is eroding. Blockchain technology has enabled a much-hyped boom in cryptocurrencies as investors seek alternatives to the US dollar, once perceived as an invulnerable safe haven. These shifting tides in the monetary system are coming to pass in different ways, at different velocities, and at different levels of visibility. On the cusp of fundamental change, it is particularly important not to lose sight of the forest for the trees.

**The global economic order was and is undoubtedly dominated by the US.** The US produces the world’s largest economic output<sup>1</sup>, enjoys far-reaching diplomatic clout, and is an uncontested military hegemon, all of which testifies to its global dominance. On the currency front, the global balance of power is embodied in the long-standing US dollar-centric global currency architecture, which critical observers have warily referred to as an “exorbitant privilege”<sup>2</sup>

### The US dollar as global reserve currency



Source: IMF, World Gold Council, Incrementum AG

**Confidence in the US dollar has evolved historically.** The status of the US as a free market economy with strong property rights and a robust rule of law, deep and highly liquid capital markets<sup>3</sup>, and a hard currency under the gold standard, have propelled the country to a global leadership position. Moreover, the fact that commodities are traded and settled in USD is of particular importance.

<sup>1</sup> In terms of nominal GDP expressed in USD.

<sup>2</sup> Valéry Giscard d’Estaing, one of the main architects of the euro, was critical of the hegemony of the US dollar even while the Bretton Woods system was still in place. See <https://en.wikipedia.org/>.

<sup>3</sup> For example, daily trading volume in US Treasuries alone amounts to more than USD 500bn.

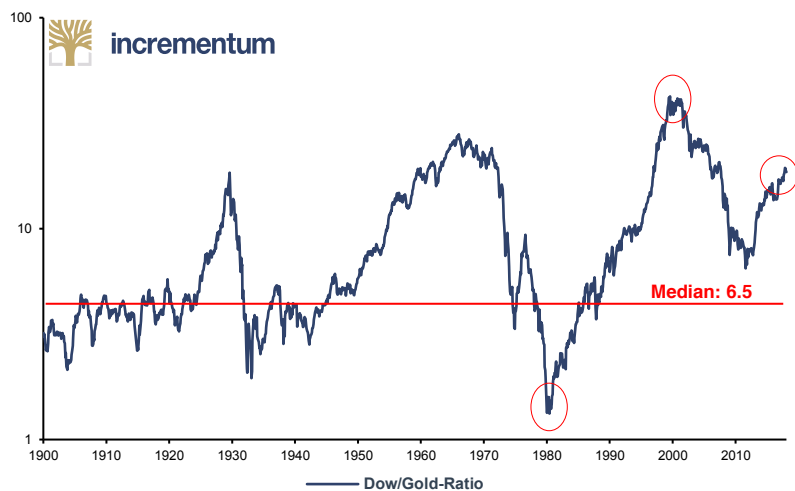


*“We are in a world of irredeemable paper money – a state of affairs unprecedented in history.”*

**John Exter**

**However, faith in the US dollar-centric dispensation is not carved in stone.** One measure of international trust is the proportion of global currency reserves held in US dollars. So far, it remains relatively static, as central banks tend to be cautious and deliberate and are not exactly prone to shooting from the hip. As Alan Greenspan pointed out, the price of gold is a useful indicator of global confidence in the US dollar as a reserve currency.<sup>4</sup> Combined with the Dow Jones index one can calculate the well-known Dow/gold ratio which also serves as an indicator of the degree of confidence or distrust in the US-centric economic and monetary order.

#### Dow Jones/gold ratio as indicator of trust in the US-centric system



Sources: Bloomberg, Incrementum AG

*“In order to destroy the bourgeoisie, one has to wreak havoc on its monetary system.”*

**Lenin**

**By the end of the 1970s, confidence in the US monetary system had eroded substantially.** The Dow/gold ratio hit an all-time low of 1.29x in January 1980, well below its median of 6.5x. Currently the ratio stands at 19x, in other words, it takes 19 ounces of gold to buy one share of the Dow Jones Industrial Average. Due to the abysmal economic environment in the 1970s and the assumed strength of the Soviet Union, it was not entirely clear at the time whether the West would prevail in the struggle against communism. **To almost everybody’s vast surprise, by the early 1990s the US emerged as the only remaining superpower, apparently inviolable in every respect.** The US dollar index reached an all-time high around the 120 levels<sup>5</sup>; budget surpluses were rolling in; and by the turn of the millennium the Dow/gold ratio hit an all-time high.

Alas, prior to the Great Financial Crisis of 2007–2009 the Dow/gold ratio suggested that faith in US leadership had already begun to sag. The boom in equities and housing markets was driven by a major credit bubble; its eventual unwinding made clear that a high price had been paid for prolonging the “good times” of the 1990s by a few years. Contrary to the late 1990s, on this occasion the gold market sensed early on that something was amiss.

<sup>4</sup> “Transcript of FOMC meeting”, May 18, 1993, p. 40

<sup>5</sup> As measured by the trade-weighted US Dollar Index, DXY.

*"We did the right thing, I hope."*

**Ben Bernanke**

**The Fed reacted decisively to the onslaught of the financial crisis.** While the ensuing years of money printing pushed nominal share prices up, the reservations of market participants found expression in the performance of share prices relative to the gold price. Trust was finally fully restored to the markets in 2012 to 2013, after the ECB promised to intervene in the sovereign debt crisis in the euro area and the Fed announced that its monetary emergency measures would be tapered and eventually discontinued. Today, ten years after the crisis, the Dow/gold ratio seems to indicate that US economy is well on the way to regain its former strength.

Or so the story goes.

**We will challenge this widely held view in this year's *In Gold We Trust* report. We see numerous reasons to question the plausibility of this narrative.**

**For instance, there are continuing efforts to turn away from the US dollar.** We believe this trend is on the one hand a consequence of increasing geopolitical polarization and tensions, as exemplified by the West's confrontation with Russia, or more recently with Iran; while on the other hand, it is also a result of the ascendance of powerful emerging market economies such as China. **Even though this process is not yet obvious to everybody, in our view the tide is turning in regard to the global monetary architecture.**

*"I think the stock market is kind of a pathetic creature of the moment and of a Fed that is no longer there. In other words, the argument for the last 30 years is, the Fed is your friend. The Fed is now the mortal enemy of the speculators. And they just don't know it yet."*

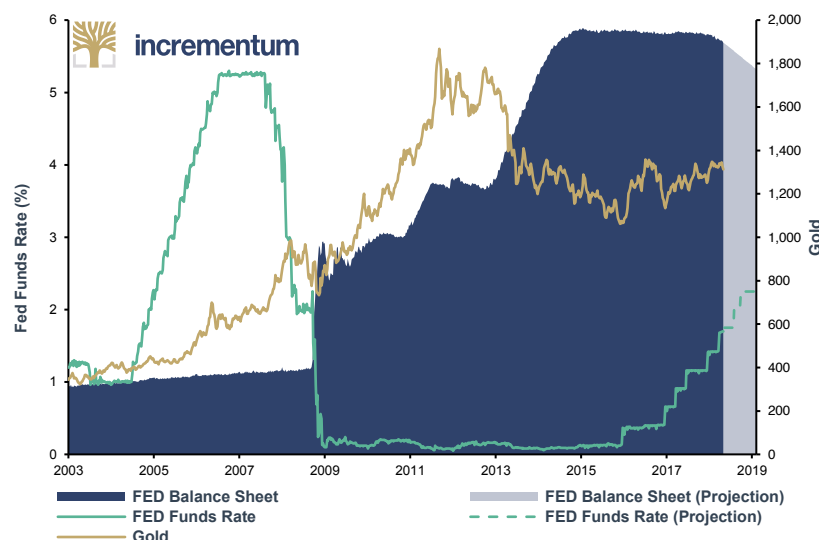
**David Stockman**

**Also most relevant for the price of gold is the turning of the tide in terms of monetary policy.** We find it quite remarkable that the gold price (in USD terms) bottomed out exactly at the beginning of the current rate hike cycle. When it became clear in 2015 that administered US interest rates would soon be raised, many market participants and observers *sotto voce* predicted a precipitous slump in the gold price. In the same year, we pointed out to our readers that rising interest rates could actually prove to be positive for the gold price. Market developments in recent years are testifying to the fact that this assessment was correct.





### Gold & Fed interest rate increases



Sources: Federal Reserve St. Louis, Incrementum AG

**In addition to hiking interest rates since late 2015, the Fed began reducing the size of its balance sheet in Q4 2017**, a process that has been dubbed “quantitative tightening” (QT). From our perspective, most market participants are currently massively underestimating the likely consequences of the QT process. The “everything bubble” which we discussed at length in last year’s *In Gold we Trust report*<sup>6</sup> is at grave risk of bursting as more and more liquidity is withdrawn. The monthly contraction in Fed assets is gradually ratcheted up and will reach USD 50bn per month from October 2018 onward. In total, the balance sheet is to be reduced by USD 420bn in 2018 and by USD 600bn in 2019. **However, we believe this monetary normalization plan is unlikely to survive a significant decline in even one, let alone several asset classes (equities, bonds, real estate).**



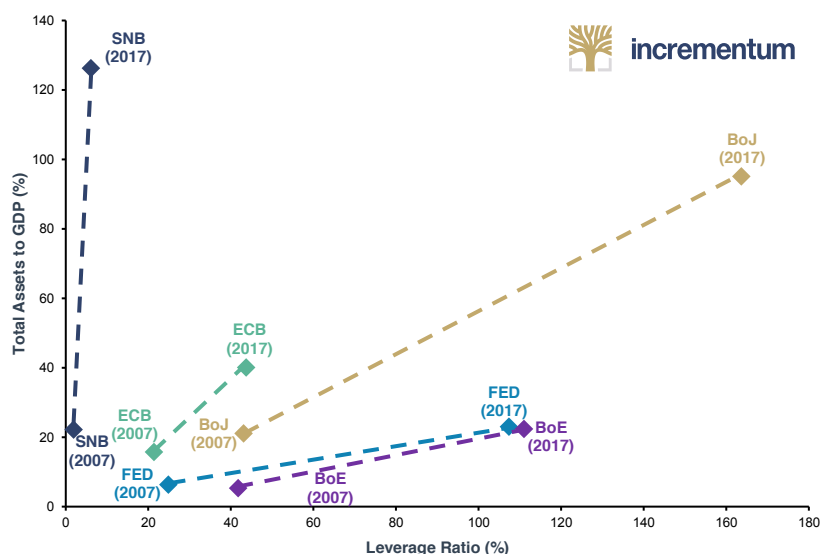
Courtesy of Hedgeye

**While the Fed is attempting a retreat from monetary accommodation, “monetary surrealism” remains alive and well elsewhere.** The QE programs of other major central banks continue, although the proponents of cautious disengagement have become more plentiful there as well. In fact, the ECB has already cut the monthly volume of its net asset purchases twice, and it is widely

<sup>6</sup> See “Introduction”, pp. 4-10, and “White, grey, and black swans”, pp. 27-46, *In Gold we Trust report* 2017

expected that they will be discontinued this autumn, to be replaced with mere reinvestment of funds the central bank receives for maturing bonds on its balance sheet. This U-turn is long overdue, as the balance sheets of many central banks increasingly resemble those of highly speculative hedge funds. The following chart illustrates that the Bank of Japan (BoJ) in particular is quite far ahead – in a negative sense – of other central banks in terms of its leverage as well as with regard to the ratio of its balance sheet to GDP.

#### Expansion of central bank balance sheets: 2007 vs. 2017



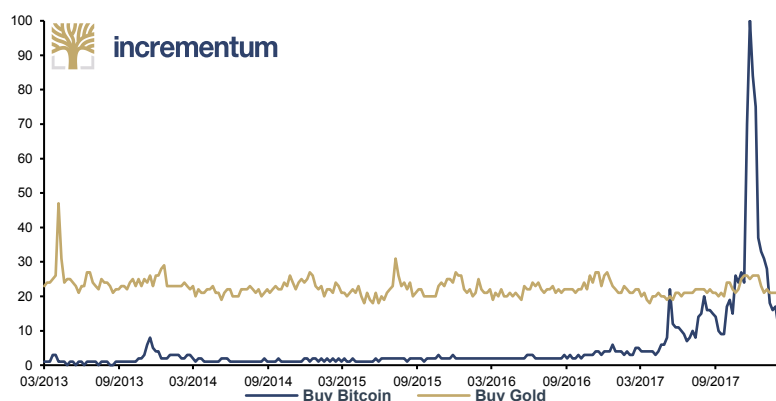
Sources: BoE, BoJ, ECB, Fed, SNB, Incrementum AG

*“The central bank must be trusted not to debase the currency, but the history of fiat currencies is full of breaches of that trust.”*

**Satoshi Nakamoto**

**One consequence of our seemingly ever more surreal monetary system is a rapidly growing interest in cryptocurrencies.** By the close of 2017, when the bitcoin price set new all-time highs almost daily, even the mainstream media were practically tripping over each other with positive news reports proclaiming the investment merits of digital currencies. The hype over cryptocurrencies generated competition for media attention previously focused on gold - at least for a certain time period, as the following chart illustrates (one could almost read it as a measure comparing the volatility of cryptocurrencies with that of gold):

## Google queries for “buy Bitcoin” vs. “buy Gold”



Sources: Google Trends, Incrementum AG

*“Invest in things that have never happened before, hedge for regression to the mean, and plan for the unimaginable.”*

**John Burbank**

**We have been covering the topic of cryptocurrencies during the past three years.** Cryptocurrencies continue to gain traction and relevance, which is why we will once again focus some of our attention on the development of this sector in this year’s report.<sup>7</sup> In particular, we will investigate whether cryptocurrencies and gold are incompatible or complementary assets. We have the feeling, that the years to come will definitely bring a technological turning of the tides.

### What does the current mixture of multifarious trends imply for gold?

Despite rising interest rates, monetary policy normalization, and a still solidly performing stock market, gold held its ground last year. Admittedly, the gold price isn’t really going anywhere at the moment. **It is still dancing the cha-cha-cha – “one step forward, one step back, one step sideways”.**<sup>8</sup> Naturally everybody wonders how much longer this will continue.

*“Our balance sheet is not intended to be an active tool for monetary policy in normal times. We therefore do not plan on making adjustments to our balance sheet normalization program.”*

**Janet Yellen,**

**September 2017**

### How will gold react when the recent headwinds turn into tailwinds?

What will happen to the gold price when equity markets stumble, the Fed feels compelled to halt or even reverse its monetary policy normalization program, serious inflation or recession worries begin to crop up, or the US dollar-centric currency regime itself is called into question? **Will gold then abandon the cha-cha-cha, find its stride, and take off like a scalded bat after the midnight quadrille?**<sup>9</sup>

**US monetary policy has to deliver now, that much is certain.** The Fed’s monetary policy remains of immense relevance – and not only due to the status of the US dollar as the senior global reserve currency. The Fed was the first central bank that attempted to overcome the financial crisis with a zero-interest-rate policy and QE. Central banks around the world eventually followed suit, embarking on a global experiment that made guinea pigs of us all. The Fed is also

<sup>7</sup> We recommend that interested readers take a look at [www.cryptoresearchreport.com](http://www.cryptoresearchreport.com), a quarterly sister report of this publication.

<sup>8</sup> Quoted in: *“Wie lange tanzt das Gold noch Cha-Cha-Cha?”* (“How much longer will gold be dancing the cha-cha-cha?”), Die Presse, April 15, 2018

<sup>9</sup> This is a play on words referring to the “Fledermaus Quadrille” (“bat quadrille”), a.k.a the “midnight quadrille”, from the operetta *Revenge of the Bat* by Johann Strauss, a dance traditionally performed at the Vienna Opera Ball and other traditional Viennese balls. Thus we speak of a scalded bat rather than a scalded cat in this case. The dance ends with a gallop in one direction (in the case of gold one suspects the direction will be up).

See: <https://www.google.com/> and: <https://en.wikipedia.org/>



*"The curious task of economics is to demonstrate to men how little they really know about what they imagine they can design."*

**Friedrich August von Hayek**

*"In Gold we Trust!"*

**Ronald-Peter Stoeferle &  
Mark J. Valek**

the first central bank to tighten the interest rate reins and reduce the size of its balance sheet. Market participants are complacent and their expectations that the Fed will fully implement policy normalization as envisaged are extremely high.

The current – albeit superficial – stability of financial markets depends on the faith of market participants in central banks, in their monetary philosophy, and thus ultimately in the maintenance of the US dollar-centric global monetary order. If the Fed fails in its normalization efforts and the US falls into recession – which is our expected scenario – a severe loss of confidence in central bank-administered monetary policy seems likely to ensue. **It is highly doubtful whether the current global monetary architecture will be able to withstand such a profound loss of confidence unscathed.**

**With all this in mind, we have chosen the image of the turning of the tide as the leitmotif of this year's *In Gold we Trust* report.** As inhabitants of a land-locked country, a changing of the tide is a fascinating metaphor to us. We neither want to be dragged into the sea by the high tide nor do we want to be left high and dry by the low tide, so we will take a step back and once again take a critical look at the big picture and examine the gold sector with our multifaceted and sober-minded analytical approach. **We would like to invite you to join us on our annual journey as we piece that picture together, and we hope you will enjoy reading our 12<sup>th</sup> *In Gold we Trust* report as much as we enjoyed writing it.**

*Yours truly,*



**Ronald-Peter Stoeferle and Mark J. Valek**



# Quo Vadis, Aurum?

*“Earlier in this bull market, investors salivated at the sight of central bankers showing up at the party. Now they get excited at the mere ringing of a bell: any drop in stock prices. Meanwhile, central bankers are taking away their sustenance of artificially low rates. The conditioning of the bulls is now complete.”*

Kevin Duffy

## Key Takeaways

- 2017 was clearly positive for gold across all major global currencies with the exception of the euro, where it incurred a slight loss of 1%.
- Since 2001, gold has outperformed practically every other asset class, and in particular every currency, despite intermittent, sometimes substantial corrections.
- The continued bull market in stocks proves to be the biggest opportunity cost for gold.
- Inflation is picking up momentum all around the world.
- In case the normalization of monetary policy fails, i.e. threatens to cause a recession, an ensuing U-turn by the Federal Reserve could trigger stronger momentum in the gold price.

**At the outset of this report, let us assess our current position, as we always do.** We will take a critical look at the development of the gold price and analyze whether we are in the early stages of a new gold bull market – as described last year – or whether our fundamental assessment was flawed.

## The status quo of gold in a currency context

*“The decline of its currency is probably the worst fate that can befall a people. Even a lost war does not do as much direct damage as the ruin of one’s monetary system.”*

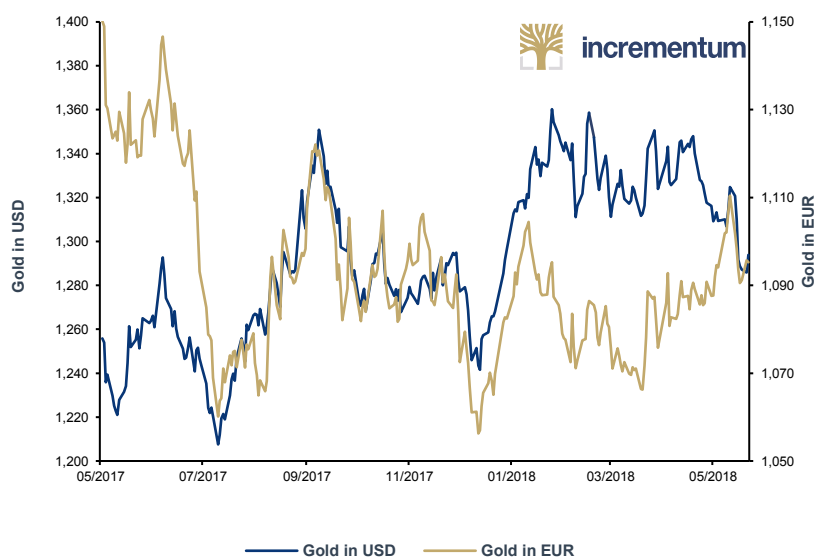
Argentarius, Vom Gelde (On Money)

*“So, the problem is not so much to see what nobody has yet seen, as to think what nobody has yet thought concerning that which everybody sees.”*

**Arthur Schopenhauer**

First, let us look at some performance data. During 2017, gold edged slowly higher, particularly in US dollars. In euro terms, the performance has not exactly been spectacular, with the gold price moving within a relatively narrow bandwidth of EUR 100. The relatively low volatility of the gold price has been one of its more outstanding aspects, falling to the lowest value in ten years.

### Gold in US dollars and euros since the last Gold Report



Sources: Federal Reserve St. Louis, Incrementum AG

*“The risk of not owning gold is greater than the risk of owning gold.”*

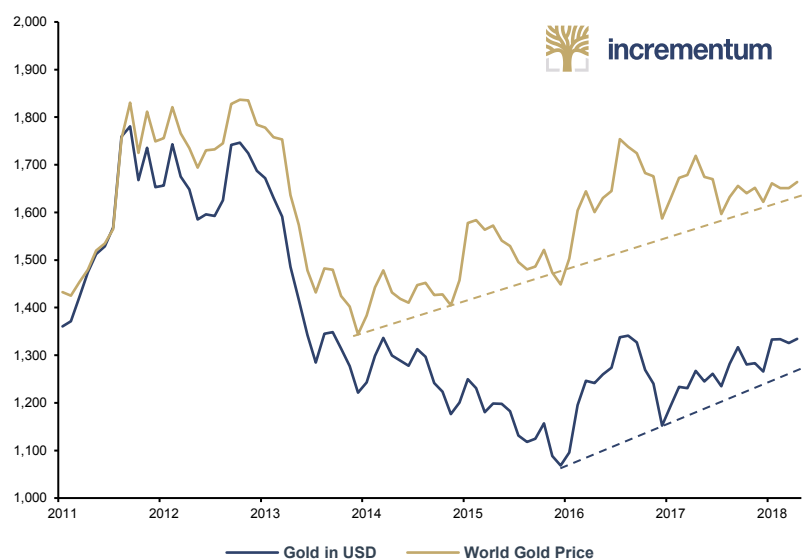
**Brent Johnson**

**The following chart is one of the classics of every Gold Report. It shows the so-called “world gold price”.** Here, the gold price is depicted not in US dollars or euros but as the trade-weighted value of the US dollar. We find that the price is not far off its highs of 2011 to 2013 anymore. Moreover, the spread between the world gold price and the price in US dollars has narrowed since 2017. After hitting its low in US dollars at the end of 2015, the gold price has recorded successively higher highs, which clearly supports our positive stance.





### World gold price vs. gold price in USD since 2011



Sources: Federal Reserve St. Louis, Incrementum AG

*“Gold is scarce. It’s independent. It’s not anybody’s obligation. It’s not anybody’s liability. It doesn’t require anybody’s imprimatur to say whether it’s good, bad, or indifferent, or to refuse to pay. It is what it is, and it’s in your hand.”*

**Simon Mikhailovich**

**“Gold: The Story of Man’s  
6000 Year Obsession”**

We now want to drill down further into the currency spectrum and look at the gold price in the most important currencies. **Overall, 2017 was clearly positive for gold across all major global currencies with the exception of the euro, where it incurred a slight loss of 1%.** The average performance in this secular bull market is still impressive. For example, the average annual performance from 2001 to 2018 has been +9.40%. **During this period, gold has outperformed practically every other asset class, and in particular every currency, despite intermittent, sometimes substantial corrections.** In the year to date, the development has been positive as well. Gold is up 0.34% on average.

### Gold performance since 2001 in various currencies (%)

	EUR	USD	GBP	AUD	CAD	CNY	JPY	CHF	INR	Average
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	-1.02%	13.64%	3.23%	4.64%	6.35%	6.42%	8.92%	8.13%	6.42%	6.30%
2018 ytd	0.70%	-1.10%	-0.50%	1.80%	0.70%	-2.90%	-2.60%	1.10%	5.90%	0.34%
Average	8.78%	10.39%	11.12%	7.70%	8.85%	8.41%	9.72%	7.02%	12.20%	9.40%

Sources: Federal Reserve St. Louis, Goldprice.org, Incrementum AG, data as of 23 May 2018

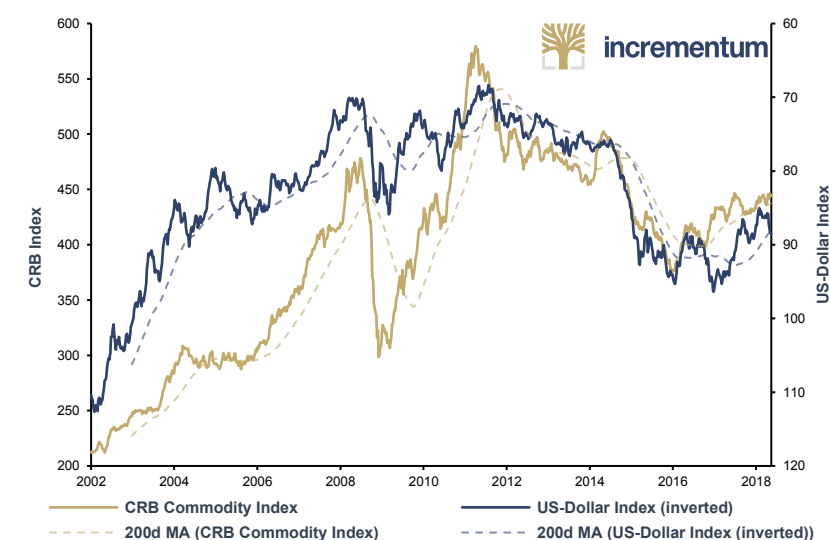
**Loyal readers know that, in our opinion, commodities are the antithesis of the US dollar.** The fluctuations of commodity prices and of the US dollar exhibit mutual dependencies, with the root causality lying more firmly with the US dollar than is generally suspected. This relationship can also be explained by the US dollar-centric currency regime (currently in crisis), which we will discuss in due course.

*“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**

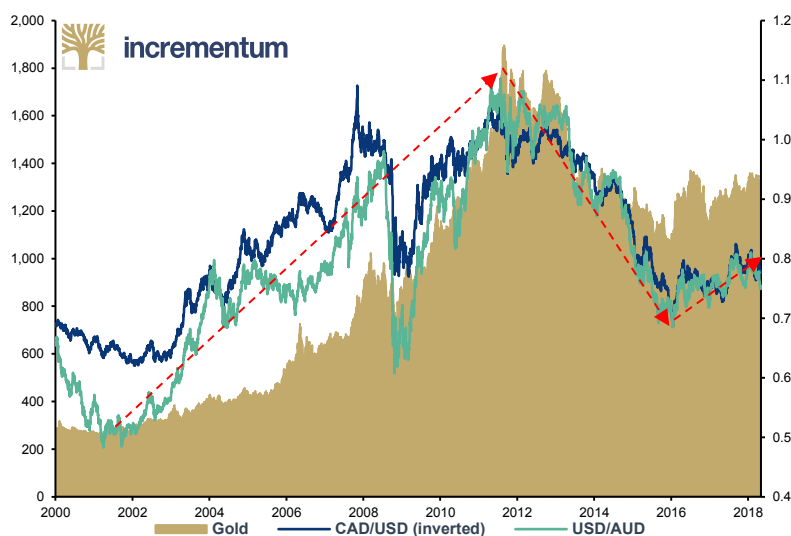
**When the US dollar depreciates against gold and commodities, its depreciation creates a global tendency toward rising prices.** The following chart highlights the interdependencies. It shows the negative correlation between the CRB Commodity Index (left scale) and the US Dollar Index (right scale, inverted). The rising moving average also illustrates that the CRB Index has established an uptrend.

**CRB Index and US Dollar Index (inverted axis) and 200-day moving average**



**The currency pairs AUD/USD and CAD/USD are regarded as commodity- and inflation-sensitive.** The following chart illustrates the high correlation between these commodity currencies and the gold price. Here, too, prices are rising vs. the USD since 2016.

### Canadian and Australian dollar (left scale) vs. gold (right scale)



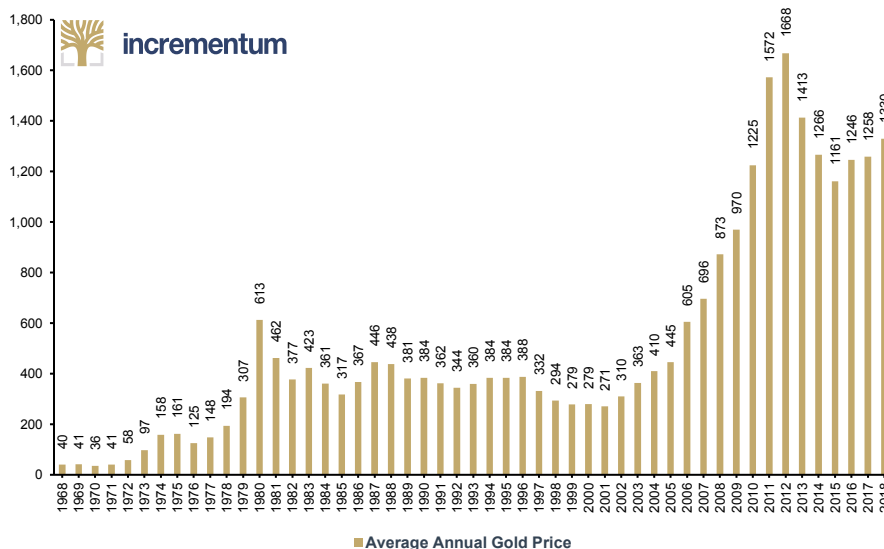
Sources: Federal Reserve St. Louis, Incrementum AG

*“The decline of the value of each dollar is in exact proportion to the gain in the number of them.”*

**Keith Weiner**

**But let us now go back even further in history.** Since 15 August 1971, the beginning of the new monetary era, gold has increased by an annualized 8% in US dollars. *Real* appreciation of currency gold vis-à-vis the US dollar has amounted to 4.5% per year on average. The long-term context puts the correction of the years 2013 to 2015 into perspective, as the following annual average price data shows. Also, the chart proves that the regular accumulation of gold can be recommended on the basis of the cost-average effect.

### Average annual gold price (USD)



Sources: Federal Reserve St. Louis, Incrementum AG

Changing one's perspective often triggers new findings. Rather than plotting the gold price in US dollars or euros, we now invert the relationship to show that the decline in the purchasing power of the US dollar, measured in terms of gold, occurs in long cycles.

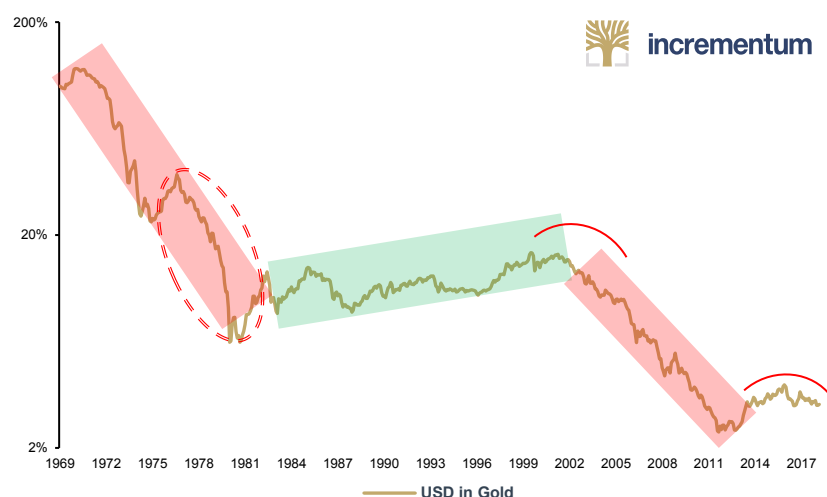


*“Being right, but early in the call, is the same as being wrong.”*

**Howard Marks**

One can see that the ongoing depreciation is so far still significantly more moderate than it was in the 1970s. However, we have not yet seen the final trend acceleration that occurred in the 1970s (marked by a circle on the chart). The short-lived strength of the US dollar reminds us of the period 1974 to 1976, when during a disinflationary phase, gold was being sold off and the US dollar appreciated significantly. **In our opinion, the similarities of the current development to that mid-cycle correction are striking.**

#### Dollar in terms of gold: Are we at the end of the mid-cycle correction? (log-scale)



Sources: Federal Reserve St. Louis, Incrementum AG

**Let us now have a closer look at the US dollar and its most recent behavior.** We find the pronounced weakness of the greenback remarkable, given the positive expectations 18 months ago, when Donald Trump was being celebrated as a messiah who had fought the election campaign on the promise to “make America great again”.

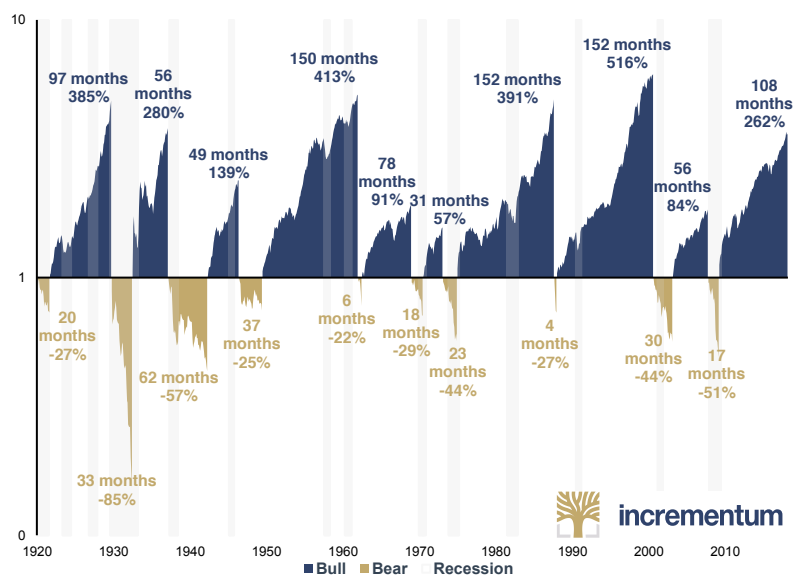
**In last year’s *In Gold we Trust* report we had already warned against regarding Trump as an economic miracle worker.** Even though the world has adjusted to his rather unconventional style of governing by Twitter, his politics remain somewhat erratic and volatile. The comparatively high gold affinity of his cabinet has also not manifested itself in day-to-day decision-making so far.<sup>10</sup>

To a certain extent, the US economy is still on the sunny side of the street: Consumer confidence is high; unemployment has fallen to its lowest level since 2001; the Fed is increasing rates and has started to curb its balance sheet (QT – quantitative tightening), while the equity market has been chasing high after high, short – and sometimes heavy – corrections notwithstanding. **At 108 months and an overall increase of 262%, the current stock bull market is one of the longest and strongest in US history.**

<sup>10</sup> See “The De-Dollarization: Good-bye Dollar, Hello Gold?”, *In Gold we Trust* report 2017, pp. 80-84



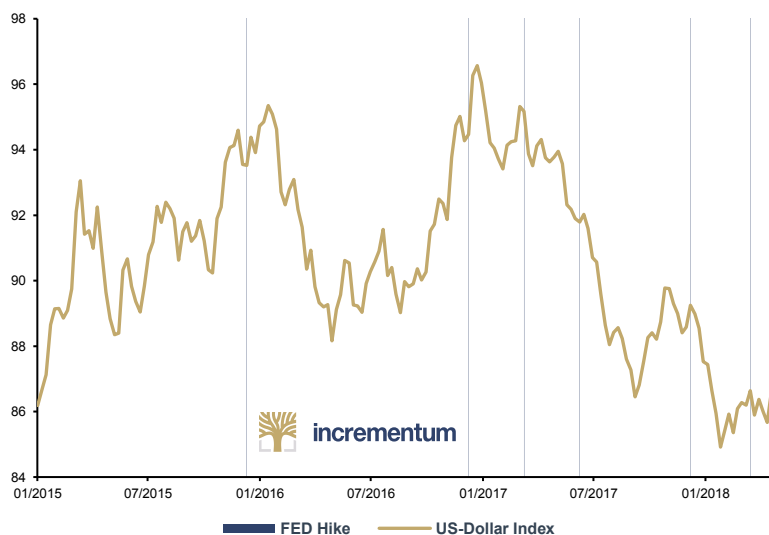
### S&P 500 Bull & Bear Markets



Sources: Robert Shiller, Incrementum AG

This confluence of factors should provide a positive environment for the US dollar. But, as the old trader's adage says, it's not the news that determines prices; it's the reaction to it. Thus the following chart is remarkable, because it illustrates the fact that the US dollar usually depreciates in the wake of interest rate hikes:

### Negative reaction of the US dollar to increases of the federal funds rate



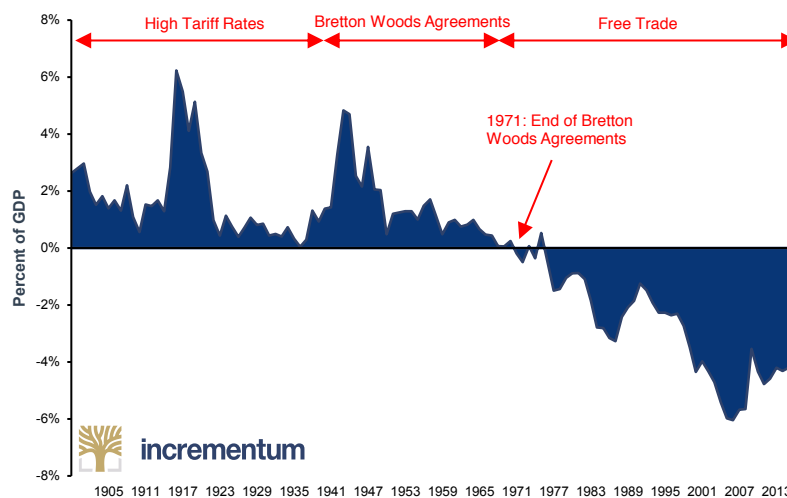
Sources: Federal Reserve St. Louis, Incrementum AG

*"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**

**Other vital US economic data suggests, however, that the situation is somewhat alarming.** The US trade deficit last year increased to USD 566bn, its highest value since 2008 – in a year, no less, when the weak US dollar should have actually reduced the gap.

## US Merchandise Trade Balance in percent of GDP



Sources: Federal Reserve St. Louis, US Census Bureau, Incrementum AG

In this context it comes as little surprise that the status of the US dollar as the classic safe-haven currency seems to be reversing.<sup>11</sup> The simultaneous correction of equities, bonds, and the US dollar at the end of January may offer a glimpse into the erosion of the currency's safe-haven status.

## Most recent phases of weakness of the USD and their consequences for gold and the S&amp;P 500

Date	Dollar Index	Gold	S&P 500
6/7/2010 - 4/29/2011	-17.50%	26.28%	28.40%
3/10/2009 - 11/25/2009	-16.48%	27.78%	63.52%
3/19/2007 - 4/22/2008	-14.46%	40.68%	1.86%
12/20/2016 - 1/25/2018	-13.85%	20.01%	25.41%

Sources: Euro Pacific Capital, Incrementum AG

**The central question we are currently dealing with is this: What will happen to the US dollar if the current Goldilocks scenario is called into question, recession worries emerge, and the Fed is forced to reverse its tightening of monetary policy?**

**In the past 100 years, the US economy has fallen into recession every six and a half years on average.** Now, more than ten years have passed, and yet the mainstream does not expect a recession in the foreseeable future. In view of this unbridled optimism, the potential for surprise seems to be clearly asymmetric. At the moment, a decline in US economic output seems as unlikely to most economists and market participants as Vin Diesel coming home with an Oscar, or the national football team of Fiji winning the World Cup.<sup>12</sup>

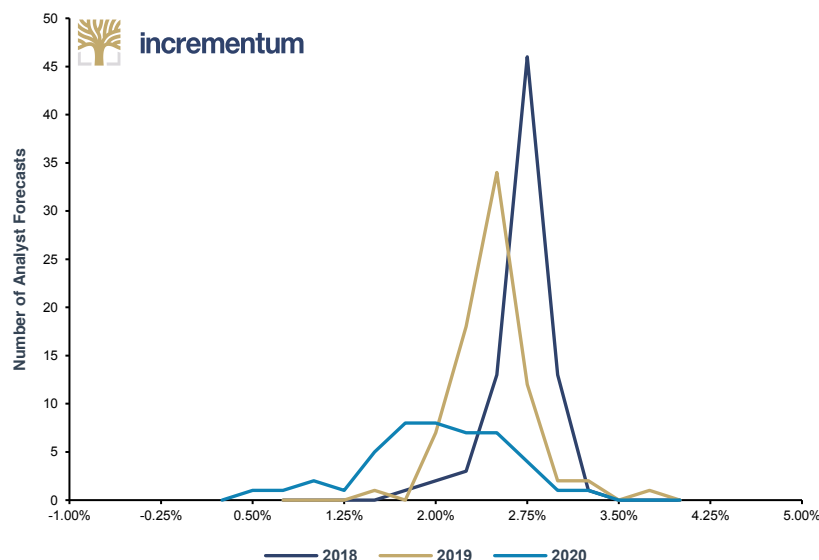
<sup>11</sup> See "Raising Rates Reflect Bigger Debt Not Faster Growth", Peter Schiff, Euro Pacific Capital Inc., February 5, 2018

<sup>12</sup> See "White, grey and black swans". In *Gold we Trust* report 2017, p. 27



Of 78 analysts surveyed by Bloomberg, not even one is expecting US GDP to contract in 2018, 2019, or 2020.<sup>13</sup> The median of the expected growth rates for those three years falls in a bandwidth of 2.1% to 2.8%.

#### Unanimous analyst consensus about further growth



Sources: Bloomberg, Incrementum AG

*“The consequences of well-meaning (but not all-knowing) economists setting the cost of money are widespread, from the inflation in asset prices to encouraging companies to spend on projects they shouldn’t. But we really don’t know the second-, third-, and fourth derivatives of the consequences that command-control interest rates will bring. We know that most likely every market participant was forced to take on more risk in recent years, but we don’t know how much more because we don’t know the price of money.”*

**Vitaliy Katsenelson**

#### Contrary to all the optimistic forecasts, some facts currently suggest an increasingly recessionary tendency:

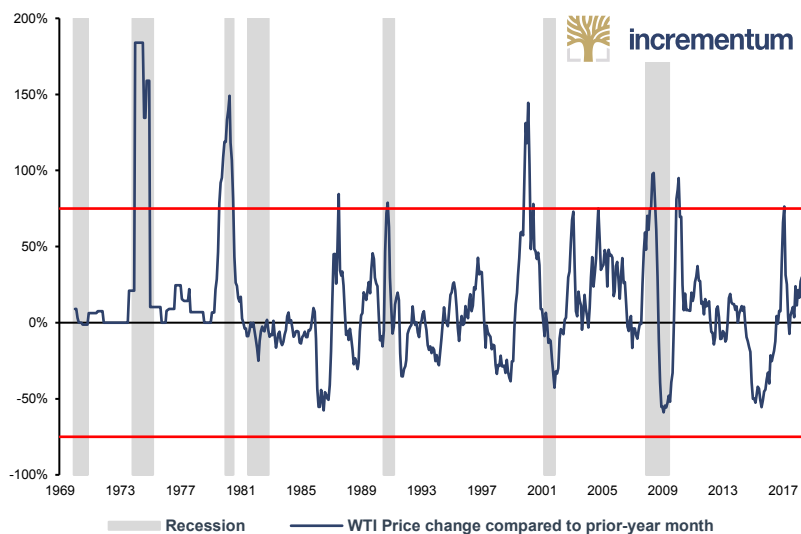
- Rising rates & QT
- Record high consumer confidence
- M&A boom
- Rising default rates
- Rising write-offs on credit card debt
- Weakening consumption rates
- Significantly flattening yield curve that could invert within a matter of months
- Strongly rising private and public debt ratios
- Sharp rise in oil prices

The following chart shows that the oil price (WTI) is currently almost 50% higher than 12 months ago. The question arises as to how far the global economy can cope with such price jumps without slipping into recession. The example of the US shows that oil price jumps quite often coincided with US recessions.<sup>14</sup>

<sup>13</sup> In 2007, NO analyst was expecting a recession either!

<sup>14</sup> See “Wellenreiter Frühausgabe”, May 15, 2018

### WTI price change (yoy) and recessions



Sources: Federal Reserve St. Louis, Incrementum AG

*"It is the preceding inflation that makes the depression phase necessary."*

**Murray N. Rothbard**

**Now it's time to deal with the question of what effects a flattening yield curve has on gold. Recent research by the San Francisco Federal Reserve Bank shows that inverted yield curves have actually anticipated most recessions since the 1950s.<sup>15</sup>** In short, higher short-term rates anticipate recessions because they indicate a decreasing demand for short-term financial assets such as bonds and show that investors are actually expecting an economic downturn and are therefore moving their demand to long-term bonds, increasing their prices and lowering their yields as compared to those of short-term bonds. The decreasing demand for short-term bonds leads to an increase of the short-term interest rates.<sup>16</sup> **Flattening interest rate spreads have empirically anticipated downturns and the subsequent appreciation of gold, in particular since the Nixon shock of 1971.**

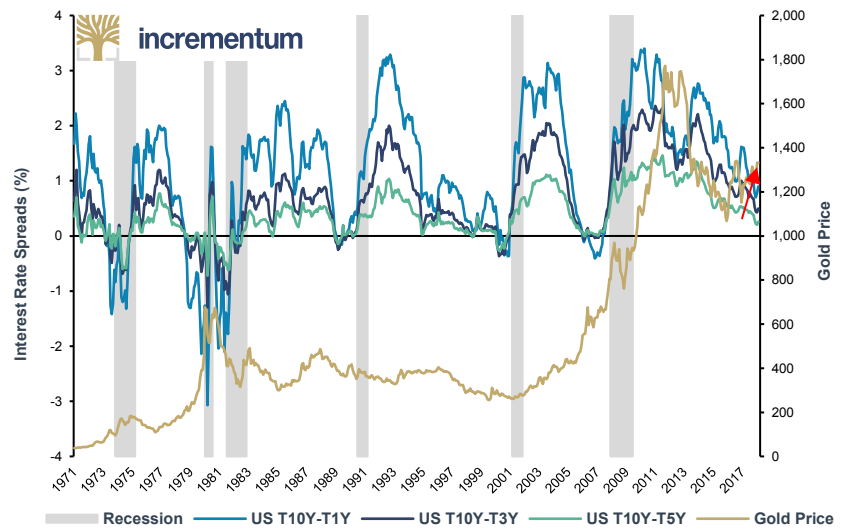
<sup>15</sup> For further detail on this study, see: <https://www.frbsf.org/>

<sup>16</sup> For a detailed explanation of this see: <https://mises.org/>





### Interest rate spreads for benchmark US Treasury constant maturities vs. gold price in USD: 1971-2018



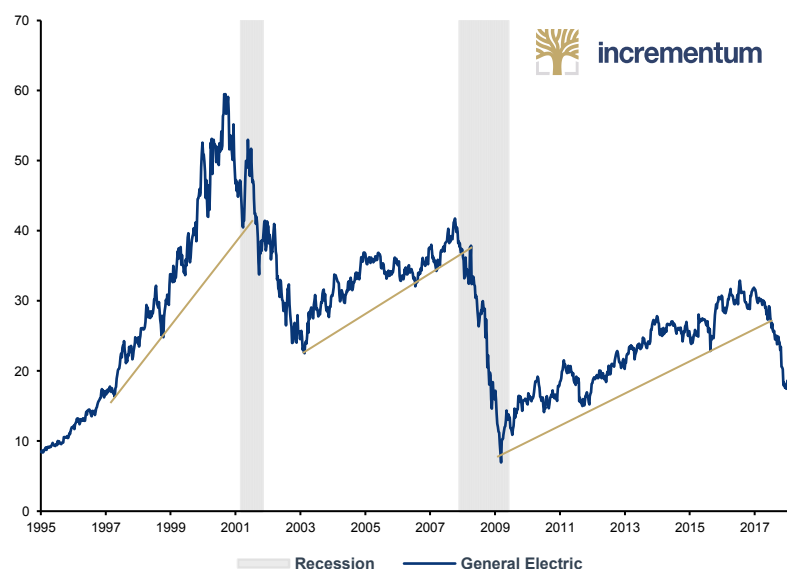
Sources: Federal Reserve St. Louis, Incrementum AG

*"In proportion as you give the state power to do things for you, you give it power to do things to you."*

**Albert Jay Nock**

**Furthermore, the US equity market is showing initial cracks as well. We regard the General Electric share as representative when it comes to the "old economy" of the US.** The following chart illustrates that the broken upward trend of the GE share was a leading indicator of the last two recessions. But GE's is not only the chart that provokes worries about the economy. Such high flyers and momentum stocks (which remind of us the infamous "Nifty Fifty") like Tesla are also trading below their 50- and 200-day lines, and the FANG stocks look technically weak.

### General Electric share and recessions



Sources: Yahoo Finance, Incrementum AG

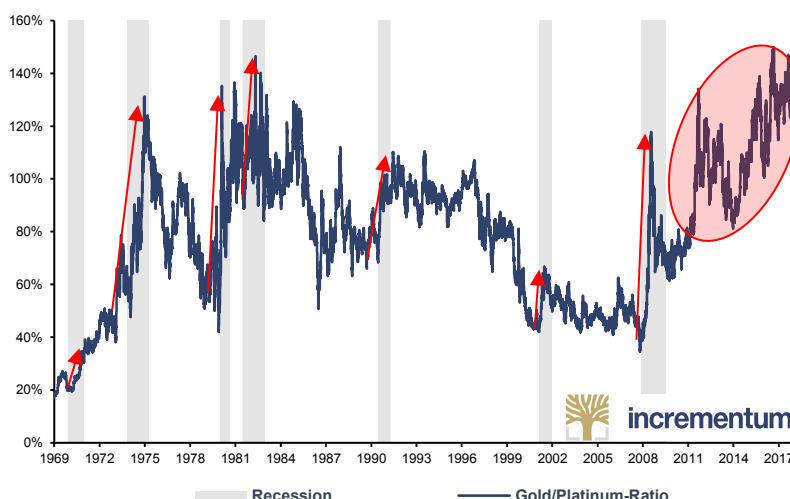
*“Waiting too long to begin moving toward the neutral rate could risk a nasty surprise down the road—either too much inflation, financial instability, or both.”*

**Janet Yellen**

### The gold/platinum ratio may be another interesting recession indicator.

In the past, the ratio has generally ranged below 100%, with the exception of the unstable economic periods that often accompany recessions. In these phases, the gold price usually rises on the back of the metal’s reputation as a safe investment, while platinum, an industrial metal, faces a decline in demand. The current high gold/platinum ratio prompts the conclusion that the ratio is a sign of economic insecurity driven by monetary instability.

### Gold/platinum ratio and recessions since 1969



Sources: Bloomberg, Federal Reserve St. Louis, Incrementum AG

*“This is why a simultaneous collapse in bond prices and the dollar could be so significant. It could show that rising interest rates do not reflect improved growth, as so many stock market bulls conveniently claim, but a loss of confidence in the dollar and the creditworthiness of the United States.”*

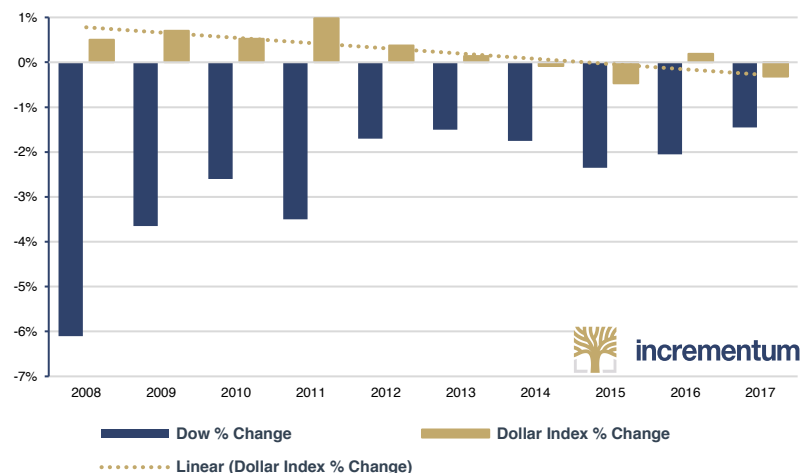
**Peter Schiff**

**But what will happen this time as clouds gather on the economic horizon? The two most recent recessions (2000 and 2008) led the Fed to cut its interest rates by 500bps.<sup>17</sup>** Now we are at 1.50-1.75%, which means that the potential for rate cuts is very limited, at least if negative interest rates are not broadly imposed.

**Looking at the average of the ten worst market days of every year in the five years from 2008 to 2012, we find that the US dollar tended to appreciate on days when the Dow Jones Index fell by at least 1%. On those days, the US dollar recorded gains in 80% of cases, rising by an average of 0.6%. However, this pattern has changed drastically in recent years. On average, the US dollar depreciated by about 0.3% on the ten worst market days each year from 2013 to 2017 and appreciated on only a quarter of those 50 days. It seems as if investors are calling less and less often on this particular safe haven.**

<sup>17</sup>The Fed cut its interest rates by an average of 5.5 percentage points in the nine recessions since the mid-1950s, a level that is impossible given the current low rates – unless negative rates are on the table.

### Average performance of the worst ten market days



Sources: Bloomberg, Euro Pacific Capital, Incrementum AG

**In view of the growing supply of US Treasuries, a further increase in yields does not seem unlikely.** For example, the Treasury Borrowing Advisory Committee expects government debt issues of USD 955bn for FY2018 (as compared to USD 519bn last year) and volumes beyond USD 1,000bn for FY2019 and FY2020. As a result of the most recent tax cuts, these numbers will probably have to be revised upwards.<sup>18</sup>

*“If we keep running deficits at this rate, we will need to think about what kind of debt burden we are going to leave for Keith Richards.”*

**Kevin Muir**

**The forecast of the Congressional Budget Office (CBO) for the US deficit in the coming ten years also looks worrying.** The CBO expects the budget deficit to rise until 2028. The annual deficit already exceeds USD 1bn every year. By comparison, the budget deficit of the entire Eurozone fell slightly short of USD 200bn in 2016.<sup>19</sup>

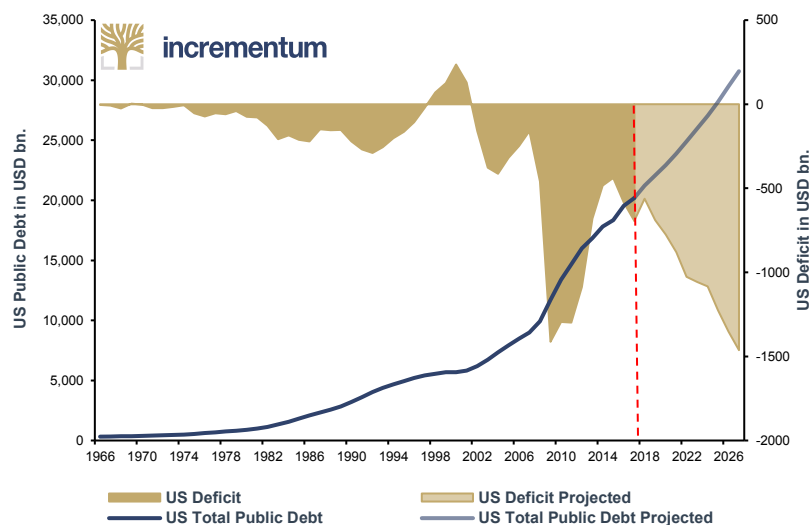
It is important to note that the CBO’s forecast hinges on very positive premises, not the least being that the CBO has based its model on non-recessionary years. Thus, from our point of view, the deficit will probably be significantly higher in the coming ten years than the CBO forecasts. The cumulative deficit for 2018 to 2028 amounts to USD 13,200bn.

<sup>18</sup> See “New Fiscal Worry: Too Much Short-Term Borrowing as Deficit Climbs”, *The Wall Street Journal*, January 31, 2018

<sup>19</sup> See “Öffentliches Defizit im Euroraum und in der EU28 bei 1,5% bzw. 1,7% des BIP”, Eurostat, April 24, 2018



### US government debt and deficits of the coming ten years



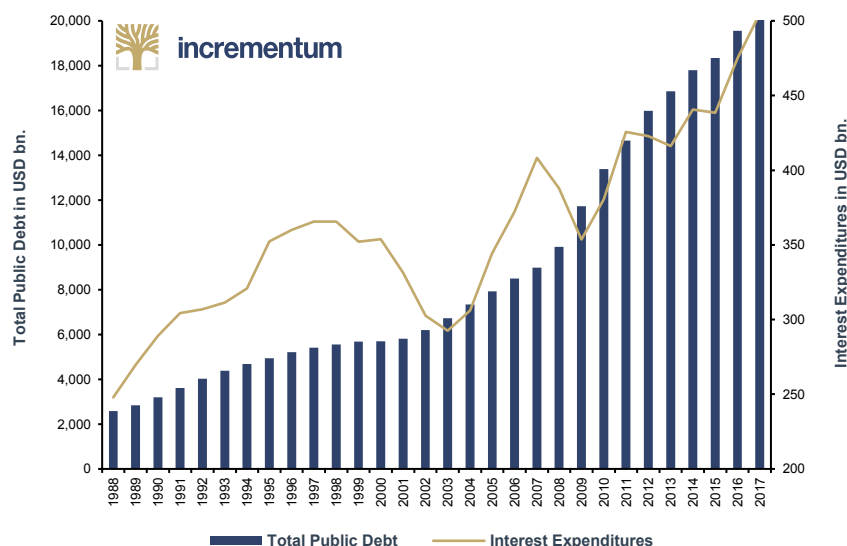
Sources: CBO, Federal Reserve St. Louis, Incrementum AG

*“Either the State ends public debt, or public debt will end the State.”*

**David Hume**

According to these forecasts, the deficit in 2028 will be larger than the one incurred in the crisis year of 2009 (USD 1,413bn) and will set a new record, at USD 1,526bn. As a result, US government debt outstanding also continues to rise rapidly. The total amount of US public debt is expected to reach USD 33,851bn in 2028, which will be tantamount to a six-fold increase within a decade. Moreover, it can be seen that interest service will reach a new record high of more than USD 500bn in 2018.

### US government debt (in USD bn, left scale) and annual interest payments (right scale)



Sources: Federal Reserve St. Louis, Incrementum AG

We have seen budget deficits of a similar magnitude only once before, in the period 2009 to 2012. **However, that was a phase when the Fed was absorbing almost USD 500bn worth of debt per year with its QE program. Now we are in QT mode, which makes the current situation considerably more delicate.**

### Conclusion

**We stick to our statement made last year, that gold is in the early stages of a new bull market.** The signs of a weak dollar accompanying that bull market are becoming more plentiful as we speak. We feel it is particularly worth noting the depreciation of the dollar within the context of trade wars. No surprise then that US Secretary of the Treasury Steven Mnuchin broke with the tradition of supporting a strong US dollar when he said in Davos, *“Obviously a weaker dollar is good for us as it relates to trade and opportunities.”*<sup>20</sup>

*“Money is probably the most concentrated and pinpointed form and expression of trust in the societal-governmental order.”*

**Georg Simmel**

### US dollar cycles since 1973



Sources: 13d Research, Federal Reserve St. Louis, Incrementum AG

**But even among the gold bulls there are numerous supporters of a strong US dollar hypothesis, among them our esteemed colleague Brent Johnson<sup>21</sup>, whose words should in our opinion be heeded as well.** Our German colleague Professor Thorsten Polleit has summarized the (short-term) bullish case for the US dollar in his usual succinct and eloquent manner:

*“As long as the other big economic and currency areas of the world are in a stagnant mood, the scope of the Fed’s interest rate hikes seems to be limited. The Americans are unlikely to aim at an unwanted, interest-driven appreciation of the external value of the US dollar, which would be detrimental to the domestic economy and US company profits. They will therefore not be able to fully escape the depreciation policies that we have seen, for example, in Japan and the Eurozone and will instead have to go*

<sup>20</sup> See [“Trump Team at Davos Backs Weaker Dollar, Sharpens Trade War Talk”](#), Bloomberg, Januar 24, 2018

<sup>21</sup> We highly recommend [Brent Johnson’s presentation “Marvel”](#).

*down the same road for a little while. The US dollar will not fulfill its role of safe haven, as investors would like it to do....*

***At best, the US currency is a through street on investors' flight from the turmoil of the global uncovered paper money system, which the US currency will ultimately also have to face. But before the US dollar starts to fail, all other currencies that depend on the greenback will find themselves in trouble: The demise of the uncovered US dollar as foreign exchange benchmark is starting at the fringes and will corrode the system all the way to the core."***<sup>22</sup>

---

<sup>22</sup> "Degussa Marktreport", Professor Thorsten Polleit, May 27, 2016





AGNICO EAGLE



Working  
Together  
for a  
Sustainable  
Future

[agnicoeagle.com](http://agnicoeagle.com)



TSX/NYSE: **AEM**

## The gold price relative to equities, bonds, and commodities

*“We happen to live now in a very exciting time, because all four asset categories are undergoing or about to undergo major trend changes.”*

Michael Oliver<sup>23</sup>

*“Compared to the Dutch Tulip Mania of 1637, stocks still look undervalued.”*

**Rudy Havenstein**

**In the formation of a comprehensive assessment, the development of gold is important not only in absolute but also in relative terms.**

Therefore, we would like to analyze the relative valuation and the trend strength of gold relative to other asset classes on the following pages.

Along with gold and silver, industrial metals such as aluminum, copper, and zinc, and of course energy commodities, and above all oil and coal, were up last year. All of this happened in an environment in which the US dollar incurred its first loss in five years and its strongest drawdown in 14 years. It seems as if the rising share prices on Wall Street as well as increasing commodity prices were the result of a depreciation-fueled boom.<sup>24</sup> **We regard this situation as a classic example of an imminent dollar bear market, the starting pistol for which the majority of investors have not heard yet.**

**We consider the stock market as the biggest opportunity cost for gold.**



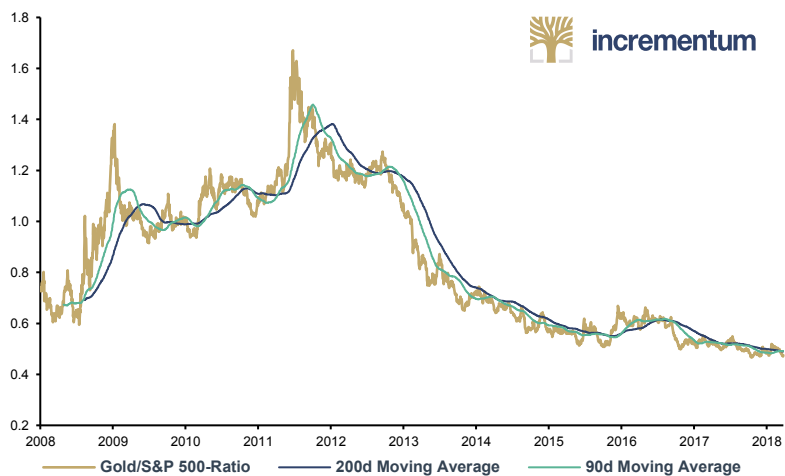
Courtesy of Hedgeye

**Therefore, a clear outbreak of the gold price would require a stagnating or weaker equity market.** Comparing gold price vs. share price development, we can see that the relative weakness of gold seems to be slowly coming to an end. Last year we were already pointing out that the intensity of the downward trend had noticeably declined. After five years of underperformance of gold vis-à-vis the broad equity market, the tables may now be turning in favor of gold.

<sup>23</sup> “A Sea Change in Momentum”, Interview by Real Vision with Michael Oliver

<sup>24</sup> In German there is the wonderful term *Abwertungs-Hausse*.

### Gold/S&P 500 ratio and 50-day and 200-day moving averages



Sources: Federal Reserve St. Louis, Incrementum AG

*“The gap between the S&P 500 and economic fundamentals can now be measured in light years.”*

**Eric Pomboy**

**The following chart was by far the most-quoted one in last year’s Gold Report.<sup>25</sup>** It clearly illustrates the fact that the relative valuation of commodities in comparison with equities seems extremely low by historical standards. Compared to the S&P 500, the GSCI Commodity Index (TR) is trading at its lowest level in 50 years and significantly below its long-term median of 4.16. **If we postulate the general tendency of reversion to the mean, we may anticipate attractive commodities investment opportunities.**

### GSCI (TR) / S&P 500 ratio: shares expensive, commodities cheap



Sources: Professor Dr. Torsten Dennin, Lynkeus Capital, Incrementum AG

<sup>25</sup> At this point we would like to again thank Professor Dr. Torsten Dennin (Lynkeus Capital), who had the idea for this fantastic chart. Jeff Gundlach (DoubleLine) was among those who quoted him, while many others copied the chart shamelessly without quoting the source at all.

*“The truth is that gold cannot be simply defined as a currency, commodity, inflation hedge of safe haven. At various times it has been some/all of these things and at other times none of these things.”*

**Charlie Bilello**

**The following chart also highlights the (relative) undervaluation of commodities.** It shows commodities in comparison to the S&P 500 and its long-term upward trend line. In order for the S&P to return to this trend line – which happens on average every six to eight years – the index would have to fall by 40%, while the GSCI would have to increase by 115% to return to trend. Indeed, that’s a scenario that seems implausible. However, a deeper look at history (and at this chart) should put things into perspective.

#### S&P GSCI vs. S&P 500



Sources: Professor Dr. Torsten Dennin, Lynkeus Capital, Bloomberg, Incrementum AG

**Let us now turn to the bond market.** It seems that the bond bull market - especially in the US – might slowly come to an end. In the last few days, yields for 3 months, 2 years and 5 year bonds have risen to their highest level since 2008 and yields on 10-year treasuries have reached their highest level since 2011. However, having a look positioning according to the most recent CoT-report as well as the following chart it seems that – at least in the short term – bond yields are more likely to fall again. The technical situation (RSI) is already extremely overbought and MACD seems poised to roll over.

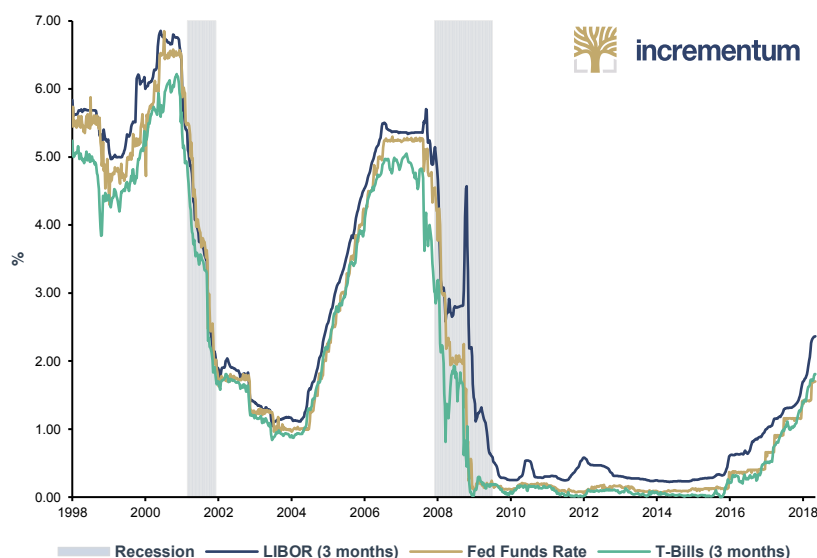
#### US 2Y yields, RSI and MACD since 1999



Sources: Bloomberg, Incrementum AG

**At this point we would like to discuss the role that LIBOR or the LIBOR/OIS spread plays.** In doing so we'll compare the development of 3M LIBOR with that of the US federal funds rate and the 3M yield of US Treasuries and then relate 3M LIBOR directly to the OIS (overnight index swap)<sup>26</sup> in order to draw conclusions regarding the international financial sector.<sup>27</sup>

#### LIBOR (3M) vs. US federal funds rate and US Treasury bill (3M)



Sources: Federal Reserve St. Louis, Incrementum AG

This year 3M USD LIBOR has increased to 230bps and is thus clearly above the US federal funds rate and the 3M US Treasury bill, as the above chart indicates. The last time LIBOR got away from the other two financial market indicators was in 2008–2009, when massive uncertainty and instability took hold of the international banking sector during the financial crisis.

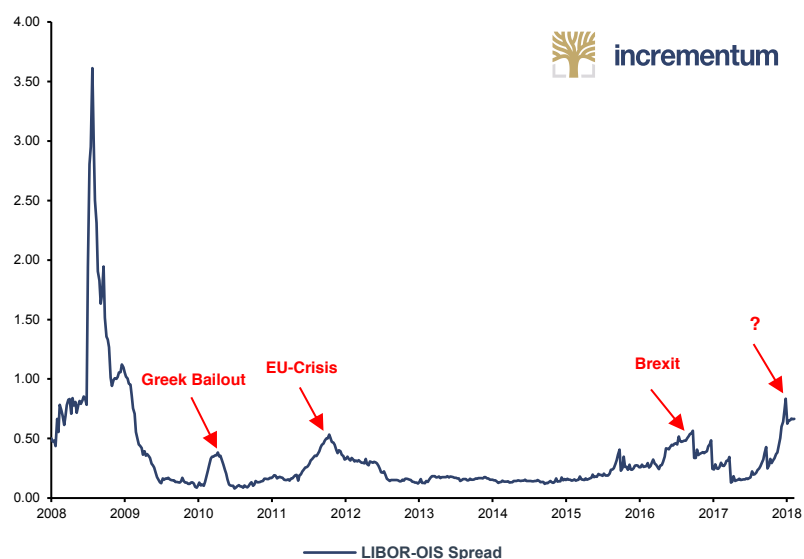
**But why is LIBOR relevant at all?** LIBOR is the most important benchmark rate for the international money and credit markets. In addition, in conjunction with the OIS, it provides an important indicator for the lending terms of interbank transactions, since, in contrast to the underlying key lending rate, it is independent of any measures taken on a monetary policy level. **A high LIBOR/OIS spread signals relatively high interest rates on credit, which makes refinancing more difficult.**

As can be seen on the next chart, the LIBOR/OIS spread has increased rapidly within just a few months. This year alone, the spread has doubled to 83bps, the highest level in nine years.

<sup>26</sup> An interest rate swap in which a fixed interest rate is swapped for a variable one. OIS transactions are mainly used by banks that wish to lock in the costs of unhedged overnight financing in advance.

<sup>27</sup> See "What is the OIS LIBOR spread, and what is it for?", Investopedia, 21 February 2018

## LIBOR / OIS spread



Sources: Federal Reserve St. Louis, Incrementum AG

**The following table shows the enormous volume of LIBOR-related financing. The rise in LIBOR will definitely put pressure on debtors at all levels and will deprive the market of spending power.**

## LIBOR-linked debt of businesses and households

	Volume (\$bn)	% LIBOR related	\$bn LIBOR related
Syndicated loans <sup>1</sup>	3400	97	3298
Corporate business loans <sup>1</sup>	1650	40	660
Noncorporate business loans	1252	40	501
CRE/Commercial mortgages	3583	40	1433
Retail mortgages	9608	15	1441
Student loans	1131	7	79
Credit cards, auto loans, consumer loans	1795	Low	

Sources: JPM, Federal Reserve New York

**In an analysis well worth a read, the New York Fed recently issued the following warning:<sup>28</sup>**

*“Because U.S. dollar (USD) LIBOR is used in such a large volume and broad range of financial products and contracts, the risks surrounding it pose a potential threat to the safety and soundness of individual financial institutions and to financial stability. Without advanced preparation, a sudden cessation of such a heavily used reference rate would cause considerable disruptions to and uncertainties around the large gross flows of USD LIBOR–related payments and receipts between many firms. It would also impair the normal functioning of a variety of markets, including business and consumer lending.*

**... as of the end of 2016, the total exposure to USD LIBOR was closer to \$200 trillion, roughly equivalent to 10 times U.S. Gross**

<sup>28</sup> Alternative Reference Rates Committee, Federal Reserve Bank of New York, March 2018



**Domestic Product.** *The notional size of the derivatives market accounts for 95 percent of the outstanding gross notional value of all financial products referencing USD LIBOR. However, USD LIBOR is also referenced in several trillion dollars of corporate loans, floating-rate mortgages, floating rate notes (FRNs), and securitized products.”*

This prompts the inevitable question of whether the stability of the banking and credit sector in the current cycle of refinancing is in danger and whether systemic risks are on the rise. As a rule, the LIBOR/OIS spread tends to rise only in times of uncertainty about economic policies, for example during the Greek debt crisis or in connection with the Brexit turbulence. The first factor to look at is the contraction of the Fed’s balance sheet. The falling supply of cheap refinancing options for the financial markets inevitably leads to rising interest rates. However, we must bear in mind that the balance sheet contraction has only just started. The supply of attractive credit will therefore not increase in the foreseeable future. **This is why we should pay particular attention to the LIBOR/OIS spread and credit markets in general.**

## Systemic overindebtedness and inflation

*“To say Congress is spending like drunken sailors is an insult to drunken sailors.”*

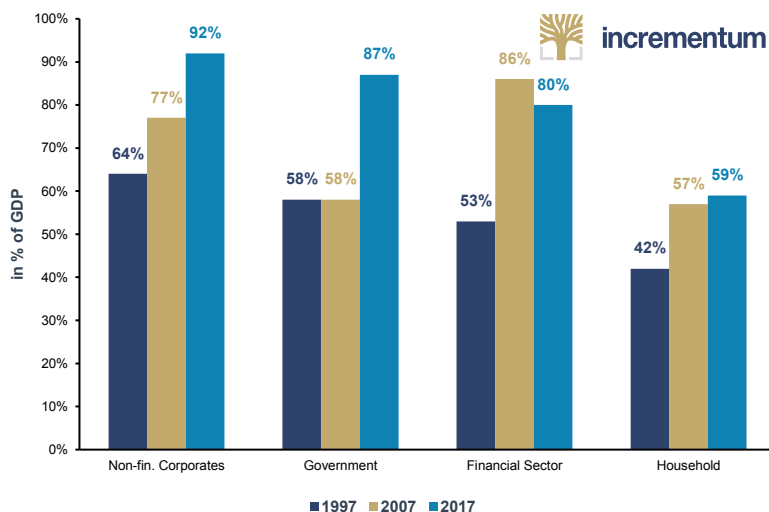
Ronald Reagan

**It is 2018, and yet again we must point out that the debt load is becoming more and more excessive in most economies without anybody’s taking note.**

Nonfinancial companies and the public sector in particular are contributing significantly to the rising volume of debt, whereas the outstanding debt of the financial sector and households has stagnated. Both the expansion of governmental market interference for the purpose of managing economic processes and ultra-loose monetary policy suggest that government wants to avoid a collapse of the financial sector and provide private households with relief. **However, the price for that intervention is enormously high.**



### Global debt by sector as a % of GDP



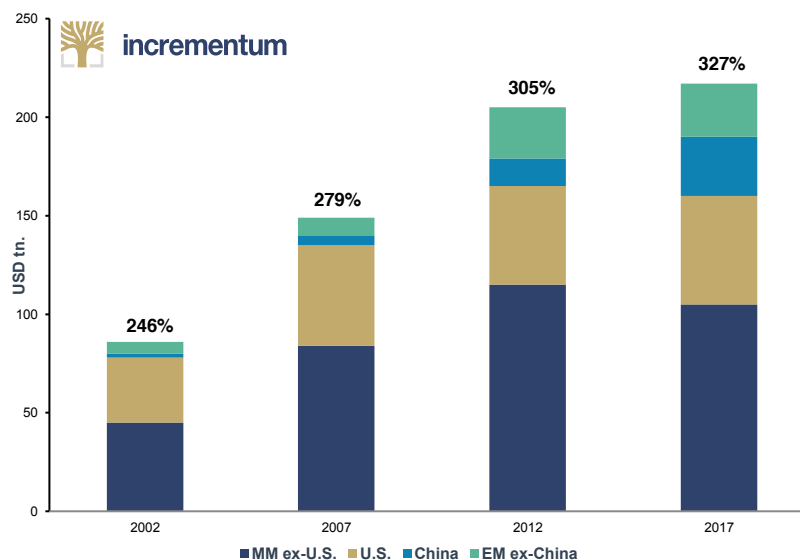
Sources: BIS, IIF, IMF, Incrementum AG

*“Madness becomes invisible once it is of a sufficiently large magnitude.”*

**Berthold Brecht**

The following chart plots the development of total debt outstanding in different economic areas. Here, too, we can see a generally increasing tendency toward indebtedness, both in absolute terms and in relation to economic output. In the period 2002–2017 total debt incurred by emerging economies including China increased by a significantly greater degree than total debt in industrialized economies.

### Global debt in USD tn. & in % of GDP 2002–2017: Mature markets and emerging markets



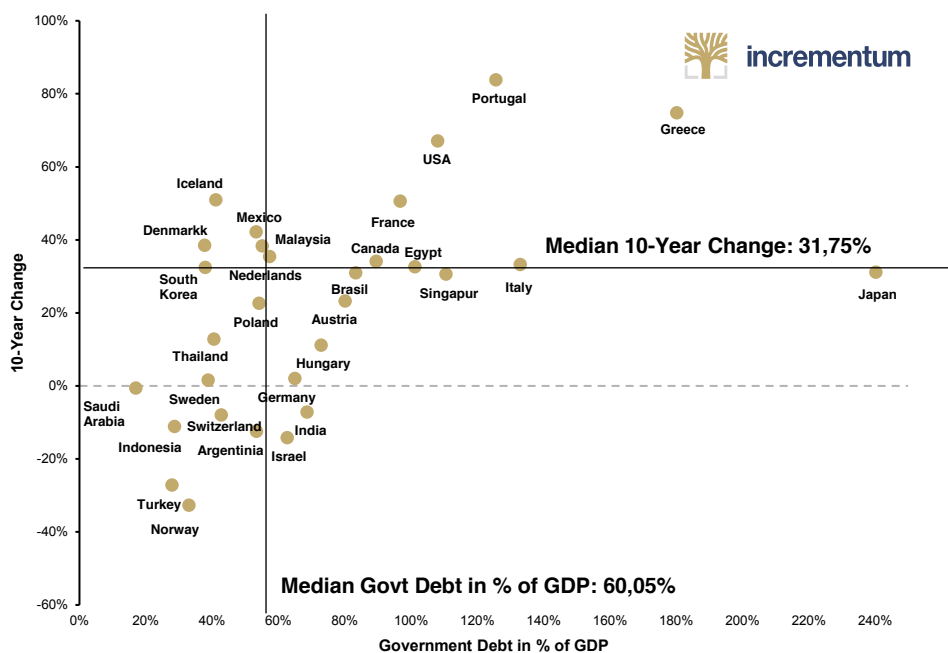
Sources: BIS, IIF, Incrementum AG

*“Will fiat currencies survive the policy dilemma that the authorities will experience as they try to balance higher yields with record levels of debt? That’s the multi-trillion-dollar question for the years ahead.”*

**Jim Reid**

China is definitely a special case here. Its swift increase in debt in just the past decade is largely due to the structural changes it has undergone. As a result of its hastened transformation, China could see its debt could rise to 290% of GDP by 2022, according to the IMF (it is currently 230%). Thus there is no end in sight to China’s debt progression, given the current policies; and this is even more alarming because a possible credit bubble in China would come with global effects due to the country’s leading position as an exporter of goods.<sup>29</sup>

#### 10Y change in government debt



Sources: IMF, Incrementum AG

The chart above shows the government debt of selected industrialized and emerging economies in terms of percentage of GDP (X axis) and its 10Y rate of change (Y axis). Greece, Portugal, and Italy as well as the US and Japan are outliers with regard to both determinants. The relatively high median of the 10Y rate of change in debt of 31.75% is quite remarkable and represents a further indicator for the direction of global debt policy. **From our point of view, this results in a situation where, due to the mere level of debt, deflation (i.e. a real appreciation of debt) is systemically impermissible.**

<sup>29</sup> We will subject this topic to a detailed discussion in the chapter on crisis triggers.

*“Today’s economic order in Europe and the US cannot be regarded as capitalism per se anymore. It is not capital that is being elevated, but credit and consumption – both are in opposition to the formation of capital. Such economic systems should more correctly be referred to as creditism or consumerism.”*

**Rahim Taghizadegan**

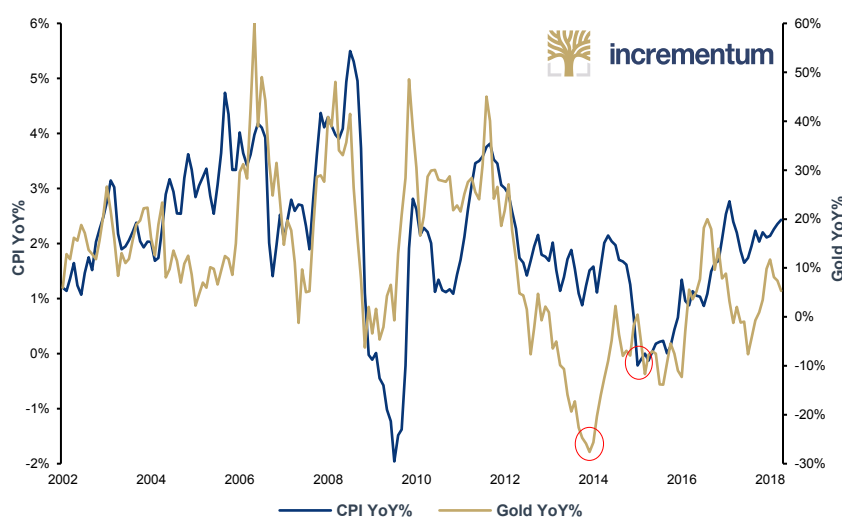
*“... in that case, the Fed will pause, and the massive short position at the front end of the curve will be seriously offside. Short rates will plummet. Gold will rally harder than Heather Locklear parties on a Saturday night.”*

**Kevin Muir**

### Let us now proceed to the development of inflationary tendencies.

Rising inflation rates generally mean a positive environment for the gold price, whereas falling but positive rates (i.e. disinflation) are detrimental, all things being equal, as the following chart illustrates. From the end of 2011 to the beginning of 2015, inflationary tendencies were clearly receding; since then, they have picked up again. In the short run, the base effect of inflation should create further upward pressure until summer. For inflation rates to continue increasing, we think commodity prices would have to rise, especially the oil price.

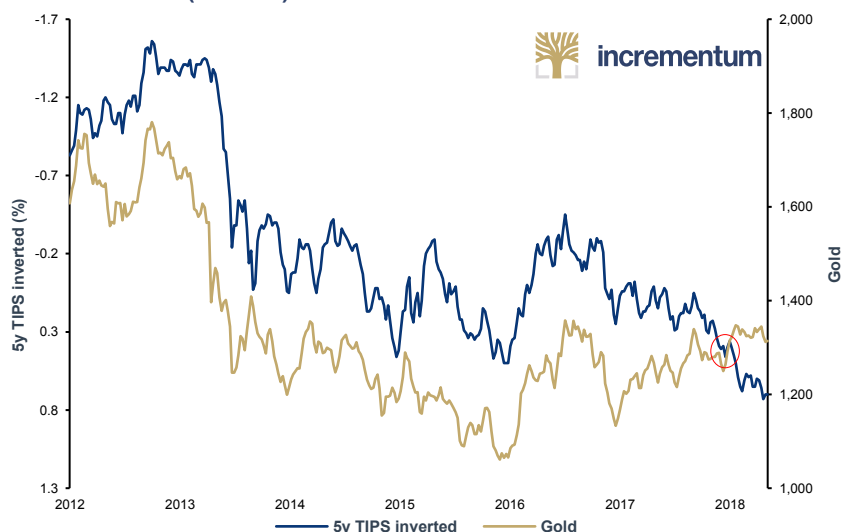
### Consumer Price Index (CPI) and gold price – rate of change in %



Sources: Federal Reserve St. Louis, Incrementum AG

**The yields of inflation-protected bonds also exhibit an extremely high correlation to gold.** The comparison of the gold price with the real yield of 5Y inflation-protected US Treasury bonds (Treasury Inflation-Protected Securities: TIPS) shows that the outbreak of the gold price at the beginning of 2016 was accompanied by the pricing-in of rising inflation expectations.

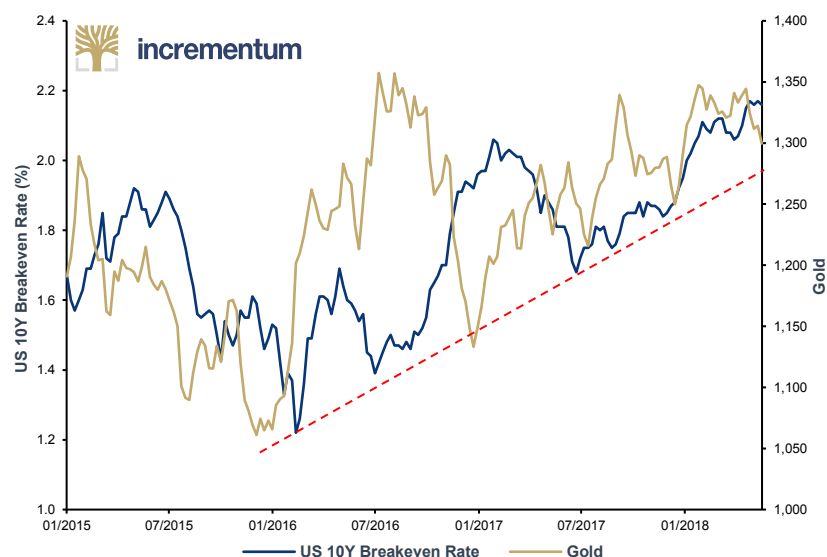
### Gold vs. 5Y TIPS (inverted)



Sources: Federal Reserve St. Louis, Incrementum AG

**The inflation rate priced into US Treasury bonds is currently signaling a rising demand for inflation protection.** In fact, inflation worries have seemingly been on the rise since the beginning of the year. PCE core inflation, the indicator favored by the Fed, has recently increased to 1.9%. We are therefore close to central banker's Elysium. **However, rising price inflation coupled with upcoming recession fears would probably be the perfect storm for gold: stagflation!**

#### US 10Y breakeven rates



Sources: Federal Reserve St. Louis, Incrementum AG

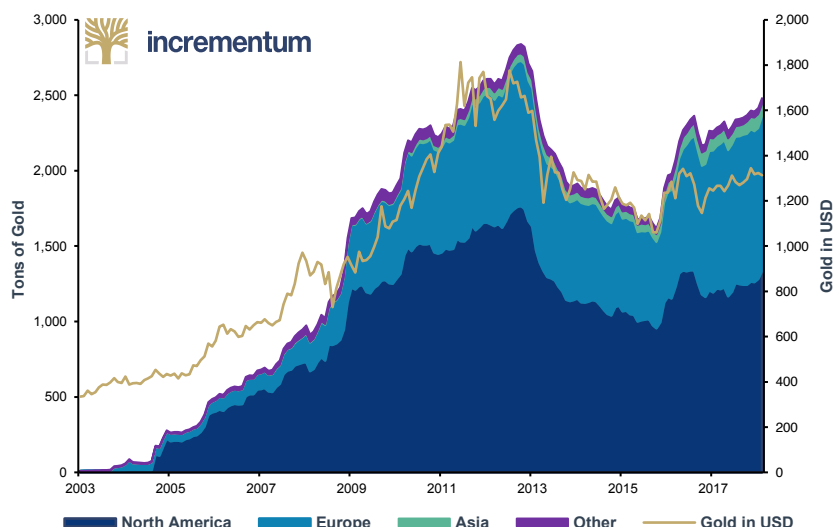
*"Investments that are denominated in a given currency include money-market funds, bonds, mortgages, bank deposits, and other instruments. Most of these currency-based investments are thought of as 'safe'. In truth, they are among the most dangerous of assets. Their beta may be zero, but their risk is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

**Warren Buffett**

**In line with growing worries about inflation, the interest of investors in gold is also slowly increasing again, as confirmed by the inflows into gold ETFs, which have been on the rise since the end of 2015.** To us, this indicator represents Western financial investors, who choose ETFs as the primary instrument for managing their gold exposure. Also, inflows into gold ETFs follow an extremely procyclical pattern. Geographical segmentation also highlights that European investors have recently allocated significantly higher volumes of assets into gold ETFs than their North American peers have.



## ETF holdings (in tons) vs. gold price



Sources: World Gold Council, Bloomberg, Incrementum AG

*“To fight this recession the Fed needs more than a snapback; it needs soaring household spending to offset moribund business investment... Alan Greenspan needs to create a housing bubble to replace the Nasdaq bubble.”*

**Paul Krugman**

**We are currently pursuing two different main scenarios that the consensus has been more or less neglecting.** First, the economy might continue to pick up speed, and the Fed could raise interest rates too hesitantly and thus remain behind the curve by a mile. Real yields would fall in such a scenario due to the increase in the CPI. This scenario reminds us of the 1970s, when two successive Fed chairmen, Arthur Burns and William Miller, failed to match the speed of the inflation increase with their rate hikes. The rest is (monetary) history.

The alternative would be that the proponents of the Goldilocks scenario are wrong, and the US economy has already peaked. We favor this scenario, because it seems as if economic optimism is already entirely priced in. **What if the surprises are on the negative side from here on out and the Fed must soon reverse course?**

The only scenario that would really harm gold would be one where, because of the continued acceleration of economic growth, the Fed tries to raise rates significantly more aggressively than the market expects. We regard this scenario as extremely unlikely.<sup>30</sup>

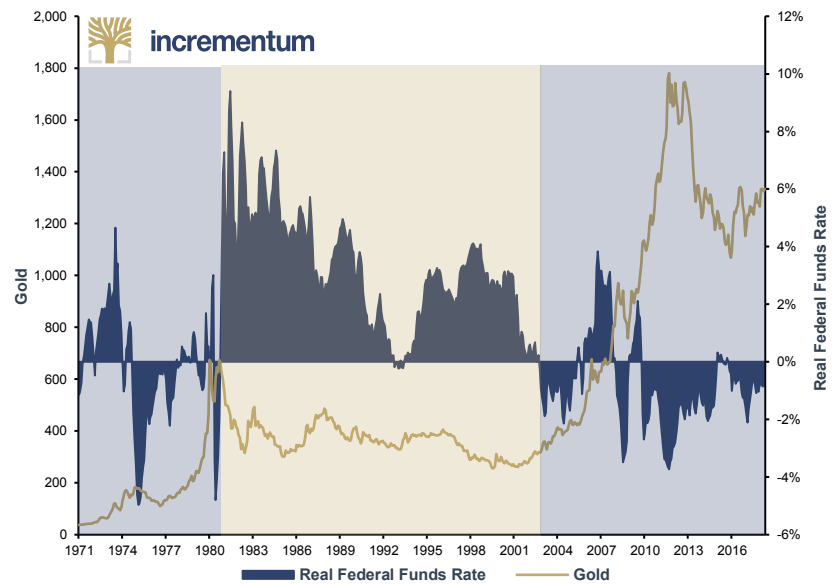
**One thing is certain in our opinion: We are unlikely to see strongly rising or clearly positive real interest rates in the coming years, in view of existing levels of debt. We are caught in a zero-interest-rate trap.<sup>31</sup>**

<sup>30</sup> See “The Macro Tourist”, Bill Muir

<sup>31</sup> See *In Gold we Trust report 2017*, pp. 165-169 or see “The Zero Interest Rate Trap: Sustainable Wealth Accumulation in a Non-Sustainable Monetary System”, Ronald-Peter Stöferle, Mark J. Valek, 2018 (to be published shortly)



## Real interest rates & gold: negative real interest rates as the perfect environment for gold



Sources: Federal Reserve St. Louis, Incrementum AG

THE VIENNA PHILHARMONIC

# A BRILLIANT COIN FOR A BRIGHT FUTURE



AUSTRIAN  
MINT

Whether you choose Vienna Philharmonic bullion coins in gold, silver or platinum, all three precious metals are safe and stable investments. The future may seem a long way off, but with the world famous Vienna Philharmonic in your investment portfolio it looks a whole lot brighter.

AUSTRIAN MINT – INVEST. COLLECT. GIVE.

[www.austrian-mint.at](http://www.austrian-mint.at)

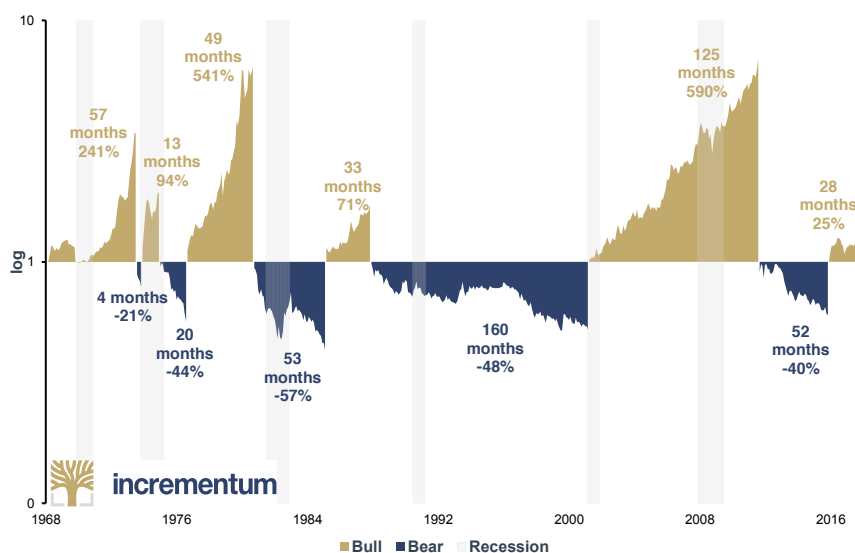
## Conclusion

*“You’ve got randomness, and you’ve got order.  
And right between them, you’ve got the phase  
transition.”*

John Beggs

**We will stick to our conviction that we are currently in the early stages of a new gold bull market**, which has been temporarily slowed down by the election of Donald Trump. The expectations of the political newcomer were clearly excessive – as we warned last year – and continue to harbor large potential for disappointment. As pointed out earlier, we can see significant upward potential, especially in the commodity markets, which now command extremely attractive valuations in a historical context, both in absolute and relative terms.

### Gold in bull and bear markets



Sources: Bloomberg, Incrementum AG

*“The relevance of gold is not in its price but in its ownership. This is precisely important for those who wish to make a profit from gold by purchasing certificates, ETFs and the like. Participating in a price movement is not the same as owning an asset.”*  
**Anthony Deden**

At the moment we are at the turning point towards a gold bull market. The macroeconomic and geopolitical factors support this tendency. **One of the things we notice across the bull markets of the past 50 years is that, even in its weakest period of increase, gold gained more than 70%. This record supports our optimism for future developments.**

From our point of view, stronger inflation tendencies or the abandoning of the rate-hike cycle in the US could trigger an increase in momentum of the gold price. **We regard these scenarios as realistic and will discuss them in detail in this report.**

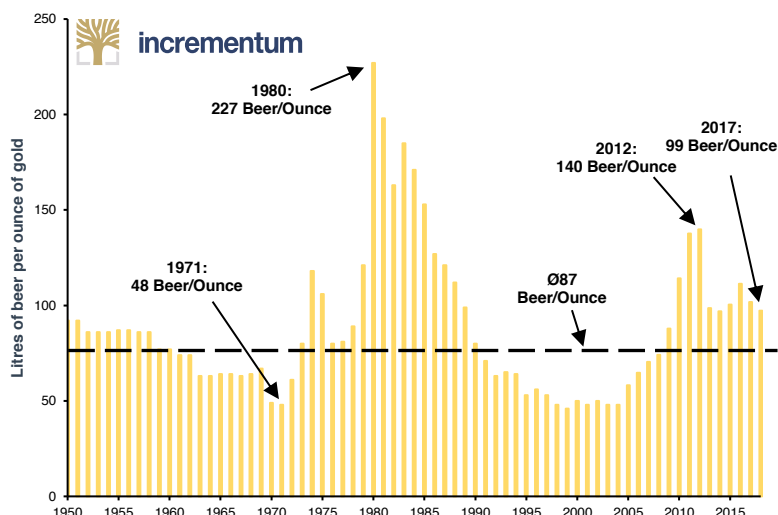
**At the end of this round-up, we would like to revisit Oktoberfest in Munich – a dearly held tradition of ours.** No *In Gold we Trust* report would be complete without the gold/Oktoberfest beer ratio. How did that ratio fare in 2017?

*“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**

In 2017, one liter of beer cost EUR 10.95. In 1950, a patron would have had to put only EUR 0.82 on the counter. This means that the price of beer at Oktoberfest has increased by an annual average of 3.9%. But how much beer does an ounce of gold buy you? In 2017, 99 liters. Relative to the historical average of 87 liters, the “beer purchase power” of gold remains well above the long-term mean.<sup>32</sup>

### Gold/Oktoberfest beer ratio



Sources: [www.HaaseEwert.de](http://www.HaaseEwert.de), Historical Archive Spaten-Löwenbräu, Incrementum AG

However, we are still far off the historic high of 227 liters of beer for one ounce of gold that was set in 1980. We do not regard this exalted level as completely unattainable. Of course, that does not mean that investors with an affinity for gold must step up their drinking game, even if the temptation of a good lager is in the same ballpark as the one for the shiny precious metal. It only means that less gold is needed this year to maintain a constant level of beer consumption.

<sup>32</sup> A price increase of 5-8% is forecast for 2018. The 11-euro threshold will probably be exceeded, especially as the City of Munich will significantly increase its turnover lease. As so often, these additional costs are passed on to consumers.



# Possible Crisis Triggers and Catalysts

*“Would I say there will never, ever be another financial crisis? I hope that it will not be in our lifetimes, and I don’t believe it will be”*

Janet Yellen

## Key Takeaways

- We are currently faced with the highest share of badly financed companies in at least 20 years. 14.6% qualify as zombie companies.
- Share buybacks – which reduce equity – have contributed significantly to the increase in the leverage ratio, which exceeded the 30% threshold again in 2017 and recorded a new set of highs.
- QT is about to begin to drain the liquidity swamp. Will this cause another financial crisis?
- China – Sword of Damocles: How will China under its new “emperor” Xi master the pressing challenges such as increasing indebtedness, the threat of a trade war with the US or demographic change?



## Introduction

*“I don’t think we’re going to have another 2008. I mean, we’re going to have something that’s different from 2008. The reason I don’t think necessarily that it’s going to be the same is because the problem that 2008 revealed, which is excessive debts and excessive leverage, has essentially been kicked upstairs to the sovereign level. And so what was a private debt crisis is likely will come back as a sovereign debt crisis, which is a completely different animal with very different parameters.”*

Simon Mikhailovich

“Gold: The Story of Man’s 6000 Year Obsession”

**The current financial and monetary order is based on debt and is therefore inherently fragile and unsustainable.** We have repeatedly outlined this harsh-sounding conclusion in our *In Gold we Trust* reports over the past eleven years and have also analytically and historically substantiated how we have arrived at it. Anyone employing the same rationale must wonder what could trigger a systemic crisis and how deep it could go.

*“If you look at mainstream economics there are three things you will not find in a mainstream economic model - Banks, Debt, and Money. How anybody can think they can analyze capital while leaving out Banks, Debt, and Money is a bit to me like an ornithologist trying to work out how a bird flies whilst ignoring that the bird has wings.”*

**Steve Keen**

Before pursuing that theme, we want to make some comments on the standing of experts. Experts tend to be surrounded by a special aura. Their assessments are appreciated, and people like to rely on their opinions. **Nevertheless, we believe that no opinion – and this includes ours – should be bought into uncritically.**

With reference to the quote from former Fed Chair Janet Yellen on the previous page, we wonder whether Yellen may not have made a critical misjudgment regarding the situation. Even though the economic mainstream has failed to issue any sort of warning with respect to Yellen’s statement, we do clearly disagree with it. **In our opinion, Yellen’s strong statement is at best naïve and at worst driven by a dangerous hubris.** In the past, we have seen other people vested with positions of relevance or regarded as luminaries of their trade come out with completely false and mistimed predictions:

- *“I believe in the horse. The automobile is only a passing phenomenon.”*  
Wilhelm II (1917)
- *“We will not have any more crashes in our time.”* John Maynard Keynes (1928)
- *“By the year 2100, all commodities worldwide will have perished. We will be out of gold as early as 1979, and silver will be out in 1983.”* Dennis Meadows (1972)



**Time will tell whether Yellen's remark will join this notorious lineup some years from now. We think it very likely will.**

#### The Monday-morning quarterback

Even if we assume that the next crisis will come sooner rather than later (and will not necessarily be a systemic one), we cannot anticipate in detail how profound the effects will be. Also, it is impossible to predict which of the possible points of rupture will fail first in any given situation. Therefore, it is crucial to keep constant tabs on a comprehensive range of potential crisis triggers. Of course, we focus on economic developments, but turning a blind eye to other factors would leave us in a dangerous and fragile hall of mirrors. Political and social developments as well as natural disasters can affect the economic situation to such an extent that they trigger a large-scale crisis.

## The fragile foundation of the financial market is showing the first cracks

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

Voltaire

*"History has not dealt kindly  
with the aftermath of protracted  
periods of low risk premiums."*

**Alan Greenspan**

**We feel this quote suits the current setup of the markets. On the surface, everything seems to be OK.** The election victory of Donald Trump prolonged the party mood and the stock boom. Unemployment in the US and in the EU is at the lowest level since 2007, while consumer confidence and the optimism displayed by CEOs are at the highest levels since that time. However, in the following we will not be distracted by the shiny surface and will therefore have a look behind the façade.

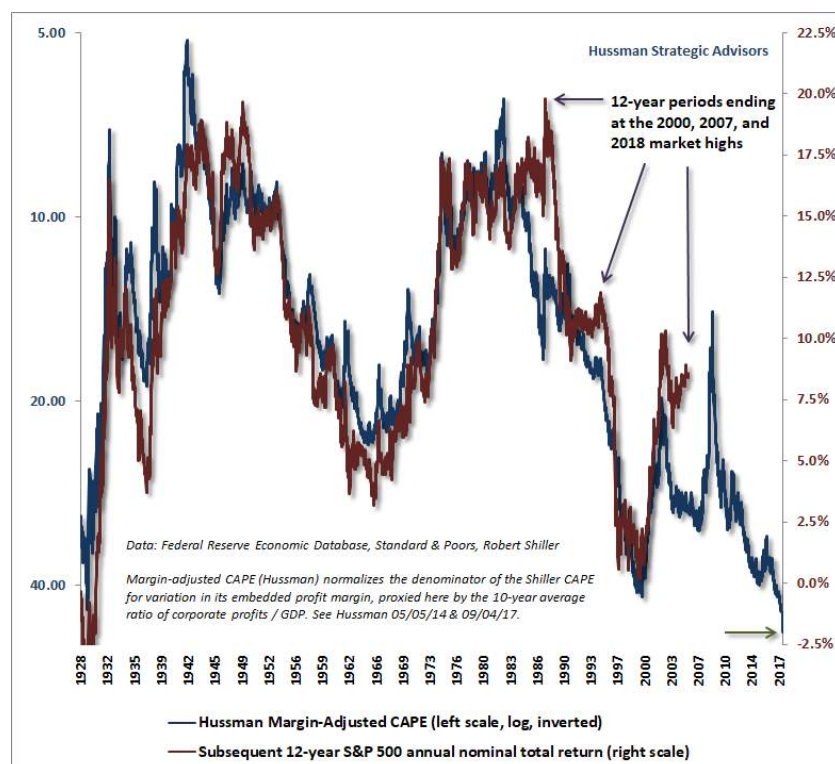
#### High share price valuations

You would be forgiven for believing that the high valuations of the equity markets are not newsworthy anymore. Even though valuations have no direct explanatory power with respect to future market developments, historical evidence shows that in cases of too-high valuations, the subsequent depth of the fall is also greater. John Hussman regularly publishes comprehensive quantitative analyses on this topic. In a recent market commentary, he concluded in view of the current valuations, US equity investors may face negative investment returns as far out as twelve years.<sup>33</sup>

<sup>33</sup> See "[Measuring the Bubble](#)", Hussman Funds, February 2018



### “Hussman CAPE” and subsequent equity market return

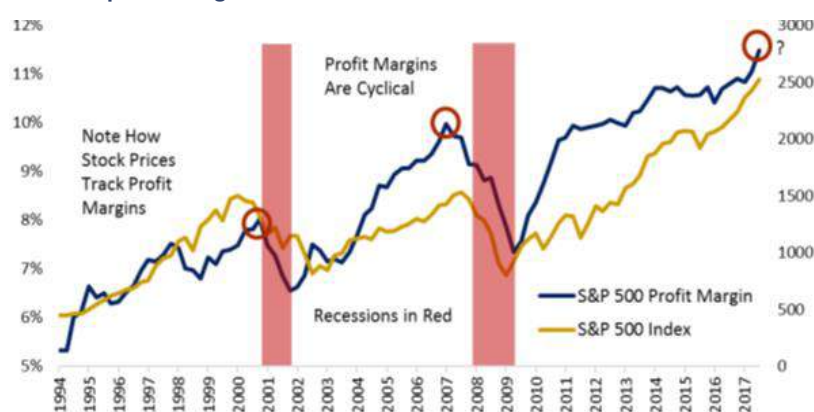


Sources: www.hussmanfunds.com

### High margins and weak balance sheets

**Profit margins in the US are currently higher than ever.** At first glance this may look positive, but it helps to know that margins were setting new highs prior to the two most recent recessions as well. However, the current values overshadow anything we have seen in the past.

### S&P 500 profit margin and S&P 500 Index



Sources: Bloomberg, Crescat Capital

**High dividend payouts and share buybacks are essential reasons for the excellent performance of shares in the past years.** The following table shows that, when taken together, the two constitute the biggest capital spending item, and they will set a new high in 2018 at USD 1,165bn.

### S&P 500 uses of funds

USD bn	2016	2017	2018est.
Capital Usage			
CapEx	618	620	690
Share buybacks	550	527	650
Dividends	434	460	515
Cash Acquisitions	361	310	360
R & D	280	295	325
Total Capital Usage	2,242	2,212	2,540

Sources: Goldman Sachs, Incrementum AG

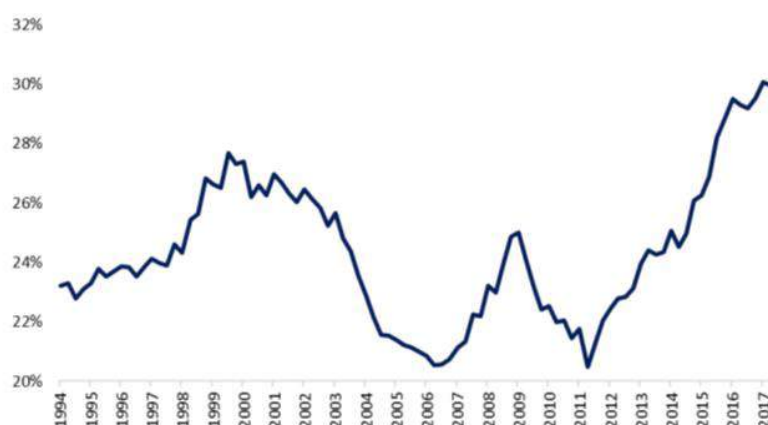
*“Markets are adapting to a new set of rules, while most market participants are still playing by the old.”*

**Bob Farrell**

At USD 3,800bn<sup>34</sup>, companies’ buybacks of their own shares have been the most important demand component for US equities since 2009.<sup>35</sup> In the absence of this stimulus, a crucial driver would cease to exist.

Despite the good earnings situation, corporate debt is at record levels. While the leverage ratio among the S&P 500 companies amounted to 25% at the peak of the last crisis and had been cut to 20% by 2011, the ratio exceeded the 30% threshold again in 2017 and recorded a new set of highs.<sup>36</sup> Share buybacks – which reduce equity – have contributed significantly to the increase in the leverage ratio.

### S&P 500 leverage ratio



Sources: Bloomberg, Crescat Capital

*“Stock buybacks are in effect creating low volatility... Share buybacks are like a giant synthetic short-volatility position.”*

**Chris Cole**

Pundits like to point out the high level of liquid funds and their possible use to pay off debt. The chart below puts this notion into perspective. The drastic increase in cash reserves from USD 700bn to 1,800bn is juxtaposed with an even more drastic increase in debt, which rose from USD 2,600bn to 6,700bn in the same period of time. From 2007 to 2016, net debt held by US companies increased by 158% to USD 4,900bn.<sup>37</sup>

<sup>34</sup> See “Volatility and the Alchemy of Risk”, Artemis Capital Management

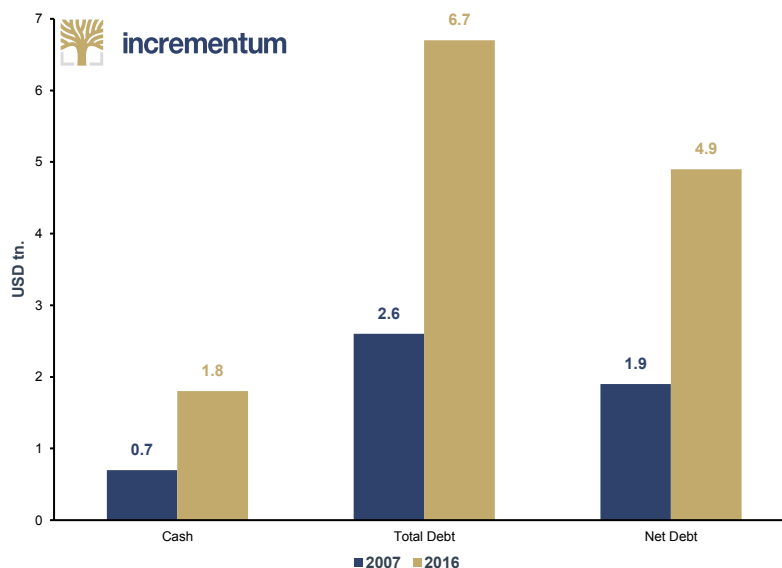
<sup>35</sup> Side note: until the early 1980s, share buybacks were prohibited in the USA. Fears were that management might use the practice to manipulate share prices.

<sup>36</sup> For the full research report, please visit: <https://www.crescat.net/>.

<sup>37</sup> The chart is based on data by Fasanara-Capital, whose reports we can highly recommend to our readers.



### Changes of liquidity and debt components of US companies



Sources: Fasanara Capital, Incrementum AG

The proclivity of companies to invest, innovate, and take risks cannot be all that impressive if company funds are returned to the shareholders to the extent they have been in recent years, rather than being used for constructive investments in company operations. Apparently, many companies seem to prefer taking the comfortable route and reduce the number of its shares instead of having to think hard about investments that create value. That said, our world has not run out of innovative ideas and new business models.

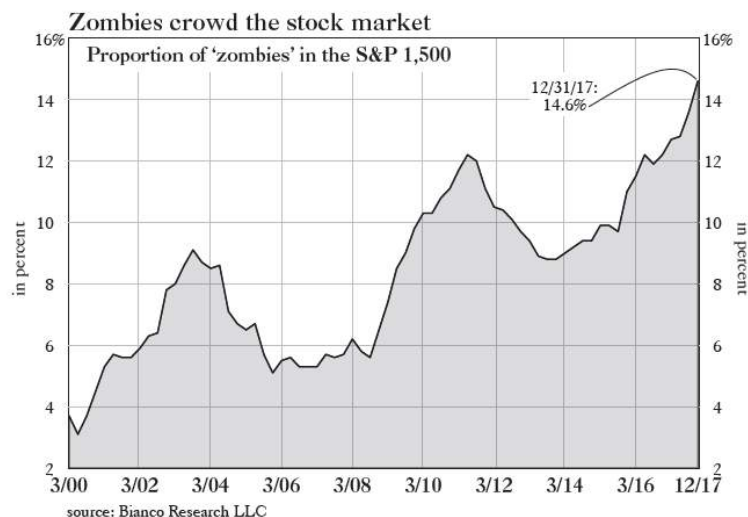


Courtesy of Hedgeye

*“The zombie is the new, sort of, archetype of our times.”*

**John Lithgow**

Yes, reality often differs from the façade. Upon closer examination, an increasing number of listed companies turn out to be zombies. Bianco Research defines zombie companies as firms whose interest expenditure is above the 3-year average of its EBIT. As the following chart impressively highlights, we are currently faced with the highest share of badly financed companies in at least 20 years. This should indeed worry investors because a Minsky Moment seems to be only a matter of time.<sup>38</sup>



Sources: Bianco Research LLC

It is not difficult to imagine how susceptible zombies are to rising interest rates and falling risk appetite. If zombies are forced to liquidate, the resulting slump in asset prices might turn into a big problem for the economy, since there is good reason to assume that the asset-price effect could be worse on the downside than on the upside. Either way, the threat to the economy by the biggest legion of zombies in history is enough that Minsky is probably turning over in his grave.<sup>39</sup>

### Correlation and volatility

The mini crash at the beginning of February 2018 was possibly a taster of a momentous paradigm shift in the financial markets – it was unusual to see both share *and* bond prices falling amid a weakening dollar. **What would be the consequences for “balanced” portfolios or risk parity investment strategies, for example, if the unusual positive correlation between shares and bonds were to last?**

*“The reality is that diversification has not been a good risk strategy, because correlations tend to spike just when you least want them to.”*

**Mark Spitznagel**

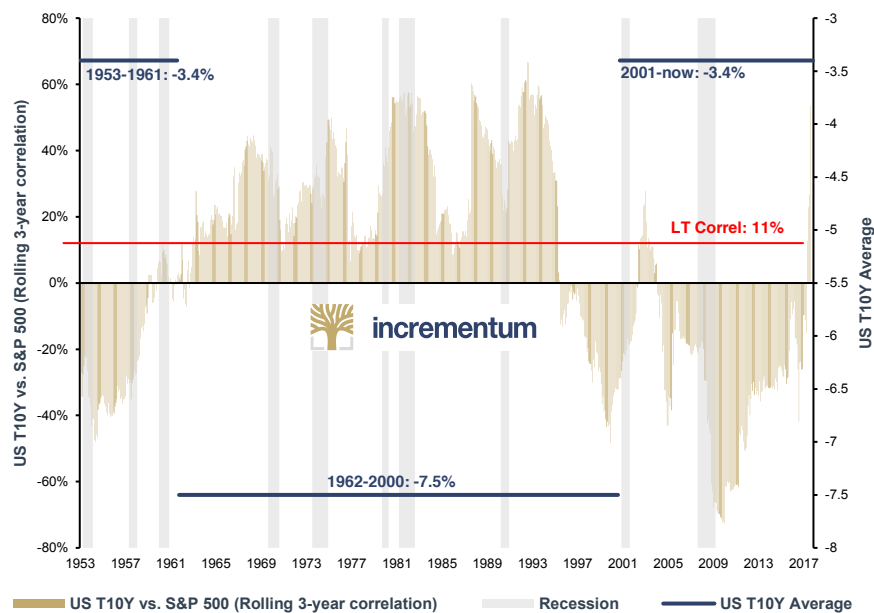
The following chart shows that share/bond correlation regimes tend to remain stable for long periods of time – but then change fundamentally. Many of today’s market participants can hardly imagine the effects of an inversion of the correlation. Also, a lot of investment concepts are based on the low or even negative correlation of these two main asset classes. An increase in correlation could result from both asset classes falling, which would be disastrous for most portfolios.

<sup>38</sup> For further details, see “The systemic over-indebtedness”, In *Gold we Trust* report 2017, pp. 114–119

<sup>39</sup> “Why we may be headed for another Minsky Moment”, Jesse Felder



### Revolving 3Y correlation between S&P 500 and UST 10Y



Sources: Federal Reserve St. Louis, Robert Shiller, Incrementum AG

*“Risk cannot be destroyed, it can only be shifted through time and redistributed in form. If you seek total control over risk, you will become its servant.”*

**Chris Cole**

### Volmageddon

We have already pointed out the unusually low volatility of the markets last year and explained why it could be treacherous.<sup>40</sup> Chris Cole has brilliantly described the current situation in a nutshell:

*“**Volatility across asset classes is at multi-generational lows. But there is now a dangerous feedback loop that exists between ultra-low interest rates, data expansion, central bank stimulus, and asset volatility. And then financial engineering that’s allocating risk based on that volatility.***

***This is leading into a self-reflexive loop where lower volatility feeds into lower vol. But, in the event that we have the wrong type of shock to the system, I believe this can reverse violently where higher volatility then reinforces higher vol.”**<sup>41</sup>*

*“It will be a lively day on Wall Street if, in response to an upside spike in volatility, risk-parity portfolios have to unwind all at once.”*

**Jim Grant**

In January–February 2018 we saw quite a bit of turmoil in the markets due to share buybacks. In the course of that correction a small segment of the tip of the pyramid, i.e. the short-VIX funds, was partially destroyed.

<sup>40</sup> Readers interested in this topic are advised to have a look at the excellent publications by Artemis Capital and Chris Cole.

<sup>41</sup> “Chris Cole: “The Coming Crash Will Be Like 1987...But Worse”, Zero Hedge





### Volatility index VIX



The chart below illustrates the situation since 2001. We can see that the volatility of the equity markets and the spread between high-yield and government bonds are following a synchronized path.

### US high-yield spread and S&P 100 Volatility Index (VXO)



A strong increase in volatility such as in 2008–09 would also prompt the expectation of sharply rising credit spreads, because companies with higher leverage – i.e. fragile companies – would run into massive problems during a downturn. However, for the time being, we have seen no spillover of the January–February correction into other markets. If the spiral were to start turning, as described by Chris Cole, investors would reduce their risk exposure drastically.



NYSE: EXK  
TSX: EDR  
FSE: EJD

Endeavour Silver Corp. is a mid-tier precious metals mining company that operates three high-grade, underground, silver-gold mines in Mexico. The Company is forecasting 20% production growth to 10.2-11.2 million oz silver equivalent in 2018. Endeavour has a compelling pipeline of exploration and development projects to facilitate its goal to become a premier senior silver producer. Our philosophy of corporate social integrity creates value for all stakeholders.

[www.edrsilver.com](http://www.edrsilver.com)

## US recession as crisis trigger

*“Synchronized global growth as the financial industry claimed at the beginning of the year? Rather brace yourself for a synchronized global recession 2 years down the road.”*

Franz Lischka<sup>42</sup>

*“The monetary system is the lifeblood of the economy, and therefore, artificial tampering with money, credit, and interest rates will affect the entire structure of the economy. When the credit bubble pops Austrian theory implies that it will have widespread fallout as the malinvestments are cleared.”*

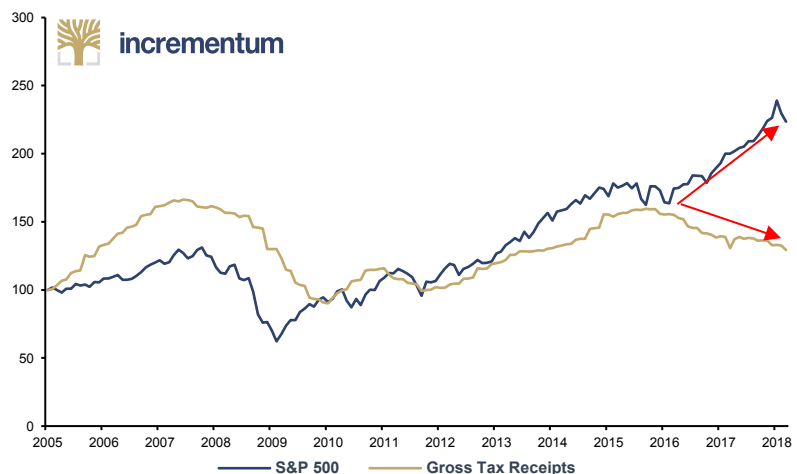
**Seth Daniels**

That a contraction of the US economy could be the trigger of a substantial crisis is no overreach of imagination. In fact, we took a close look at possible triggers of a recession in the US last year.<sup>43</sup> Clearly, in 2017 that recession didn't come. In fact, if you were to focus exclusively on the tweets of the US president, you would be forgiven for thinking that a recession is completely impossible.

### Debt & tax revenues

The economic upswing was prolonged by another year, and as of May 2018 it is the second-longest one in history. Tax revenue growth has recently decelerated significantly, even before the tax cuts decided on by the Trump Administration. Remarkably, for the first time in many years, tax revenues and the S&P 500 Index are not walking hand in hand, as the following chart highlights.

### Development of US tax revenues and the S&P 500



Sources: US Bureau of the Fiscal Service, Mac Overton, Incrementum AG

Generally speaking, tax revenues are positively correlated with share price performance. Therefore, this decoupling, i.e. falling tax revenues and rising share prices, is an indicator that the economic situation may not be as rosy as it seems.

<sup>42</sup> We highly recommend Franz Lischka's Blog: <http://franzlischka.blogspot.co.at/>

<sup>43</sup> See "White, grey, and black swans", *In Gold we Trust* report 2017, pp. 26-49

*“When national debts have once been accumulated to a certain degree, there is scarce, I believe, a single instance of their having been fairly and completely paid.”*

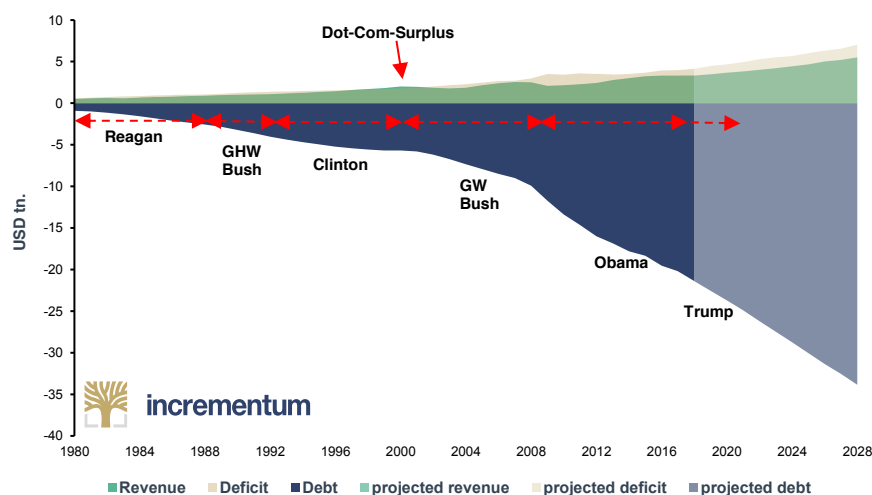
**Adam Smith**

### US debt metrics

The debt load of various economic agents and indeed of society as a whole is a crucial factor in view of interest rates, which are currently rising for the first time in many years. Let us therefore remind ourselves of some of the debt metrics in the US again:

- Government debt has more than doubled to USD 21,000bn in the past decade.
- An additional budget deficit of USD 1,000bn is expected for the fiscal years 2017–18 and 2018–19.
- The CBO expects a deficit of USD 13,200bn for the period 2018 to 2028. However, these numbers are based on the highly unrealistic assumption that there will be no recession before 2028.
- Government debt is expected to rise to USD 33,800bn by 2028

### US debt and US deficit forecast to 2028



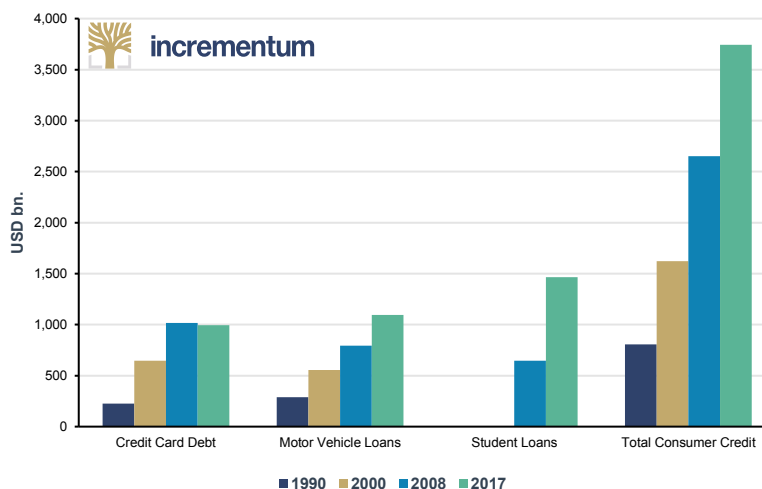
Sources: CBO, Federal Reserve St. Louis, Incrementum AG

While on this side of the Atlantic some countries, such as Germany, Austria and Denmark, are taking advantage of the favorable macroeconomic environment – low interest rates, good economic performance, low unemployment – to reduce government debt (in some cases drastically so), we do not see the same strategy unfolding in the US, despite the fact that the economy has been going through a boom. **This prompts the question: To what magnitude will the US deficit explode in the wake of the next recession?**

Private US households are also setting new records in debt outstanding. Here are some prominent debt data (as of 31 December 2017; please also refer to the following chart):

- USD 1bn in credit card debt and overdraft facilities
- USD 1.3bn in car loans
- USD 1.5bn in student loans
- USD 3.8bn in consumer loans

### Debt outstanding from US private households



Sources: Federal Reserve St. Louis, Incrementum AG

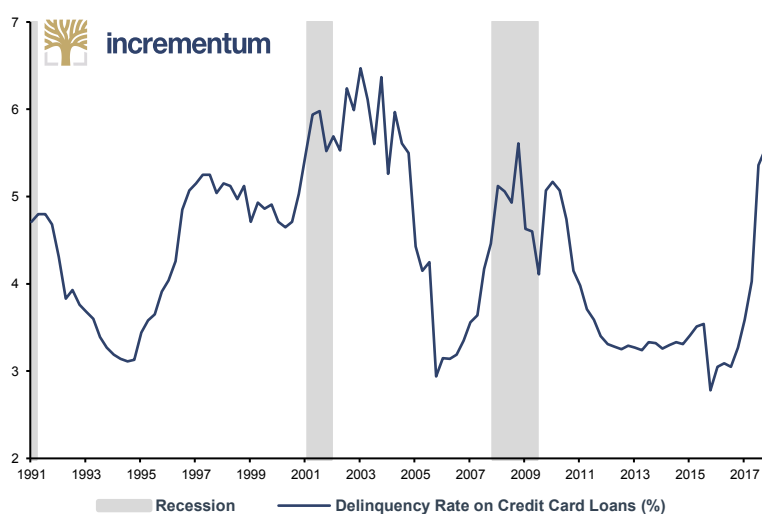
*“Spending on credit cards surged 9.4% in 2017.... When consumers push more of their spending into credit cards, it means they are spending beyond their means.”*

**Larry Jeddloh**

The debt data stated above puts the economic recovery of recent years into perspective, as it is primarily due to exploding credit and money supply. We also refer you to the aforementioned debt problem among US companies, where we can see similar symptoms.

**While US consumption has recovered significantly in recent years, there seems to be a fly in the ointment here.** In spite of low interest rates, the write-offs of credit card debt have increased drastically and are currently at 6.16% – a percentage we last saw in 2003. Further interest rate hikes will be poison for borrowers and lenders alike, and we therefore recommend paying heightened attention to the default risks of the banking sector.

### Write-offs of credit card debt



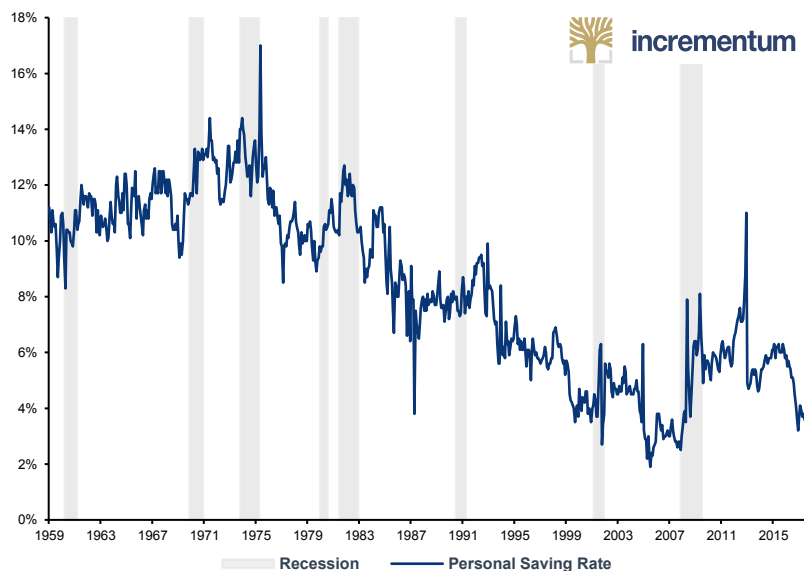
Sources: Federal Reserve St. Louis, Incrementum AG

*“The reality is half of Americans can’t afford to write a USD 500 check.”*

**Alan B. Colberg**

While the private savings rate was above 10% in 2013, it is now approaching 2% again, which suggests a rather more strained financial situation.

#### US savings rate since 1959

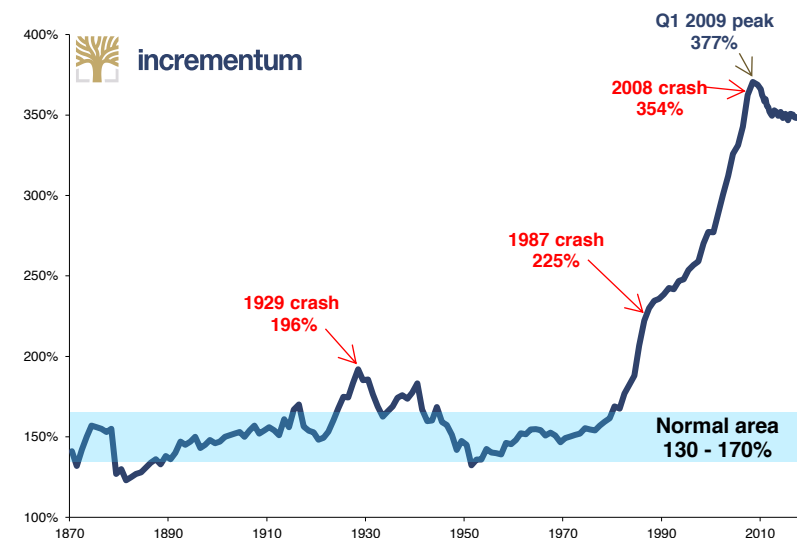


Sources: Federal Reserve St. Louis, Incrementum AG

As far as the long-term development of debt in the US is concerned, the ratio of total debt in the economy to GDP has been roughly 150% over the past 150 years. There have been two significant exceptions: the 1920s (“The Roaring Twenties”), where the foundation for the stock exchange crash and the Great Depression was laid by the strong expansion of credit, and the current phase, which started in the 1970s.

Whereas after the Great Depression total debt was massively cut, the loose interest rate policy implemented by Alan Greenspan after the crash of 1987 further boosted total debt. In 2009, total debt amounted to 377% of GDP, setting a new all-time record. Since then, we have gone through a mild form of deleveraging, but at 349% we remain at unhealthily high levels.

### Total US debt in % of GDP



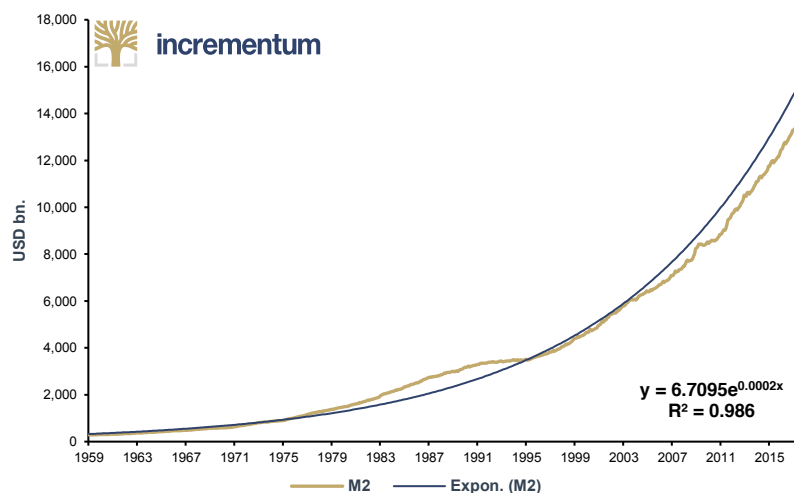
Sources: Dr. David Evans, [www.sciencespeak.com](http://www.sciencespeak.com), Incrementum AG

*“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

**As our readers know, in today’s strongly leveraged fractional-reserve credit money system, 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 therefore becomes an end in itself for the credit-money system.**

### The exponential inflating of the M2 money supply (USD bn)



Sources: Federal Reserve St. Louis, Incrementum AG

**In summary, the economy of the US is in significantly worse shape than prior to the last financial crisis.** The majority of the measures taken, such as interest rate cuts and the expansion of the money supply, have only calmed the symptoms of previous distortions rather than being a comprehensive remedy. As a result, the next downturn is likely to be of a more sizeable magnitude than the previous one in 2008–09.



## From QE to QT – the ultimate crisis trigger?

*“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

*“I can also definitely say that QT will be boring. It will be the policy equivalent of watching paint dry.”*

**Patrick Harker, President, Philadelphia Fed, May 2017**

**While the BoJ and the ECB remain miles behind the curve, the Fed has been on a rising interest path for quite some time now.** This is particularly relevant for the financial markets, given that the Fed is the central bank of the global reserve currency and is therefore decisively responsible for the global cost of capital. We pointed out last year that rising rates tend to herald a recession.

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.**

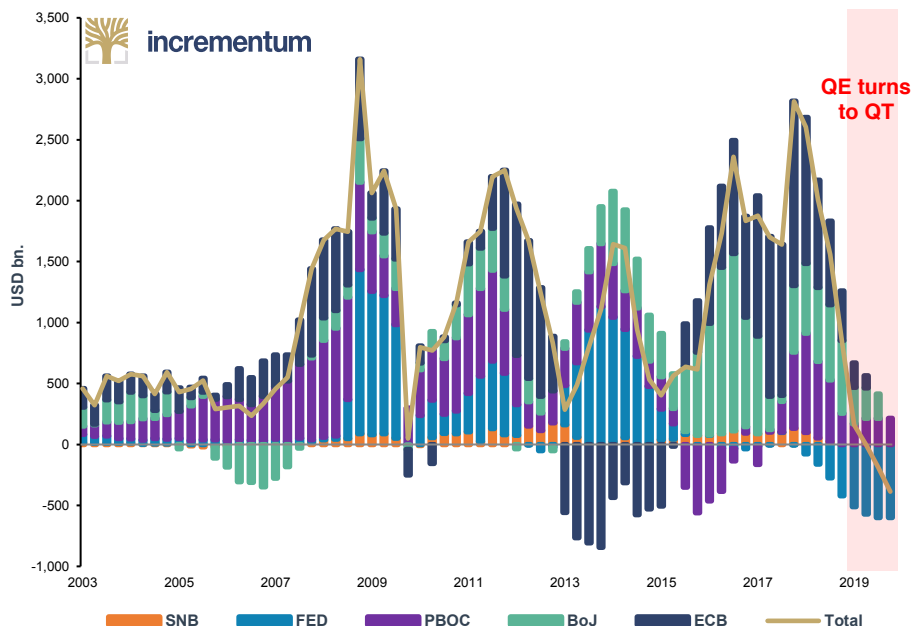
### Interest rate increases have almost always led to recessions



Sources: Federal Reserve St. Louis, Incrementum AG

**In addition to rising interest rates, another crucial factor entering the picture is the contraction of central bank balance sheets.** Slowly but surely, the ECB, BoJ, and BoE are thinking about measures similar to the ones already taken by the Fed. **Thus, 2018 could be the year when the central banks withdraw liquidity from the financial markets for the first time since the financial crisis.**

### QE heading for the turning point in 2018 (monthly net flows of bonds in USD bn, annualized)



Sources: Bloomberg, Incrementum AG

*"We've never had QE like this before, we've never had unwinding like this before..."*

*When the unwind happens of size and substance, it could be a little more disruptive than people think. We act like we know exactly how it's going to happen, and we don't."*

**Jamie Dimon**

Let's pause and look back. The three QE programs of the Fed had the following effects on the financial markets:<sup>44</sup>

- Rising share prices
- Rising risk appetite
- Narrowing credit spreads
- Falling interest rates (at the short end of the yield curve)
- Dampened price inflation
- Record lows of volatility

**To expect that QT will have the exact reverse effects of QE is intuitively obvious.**<sup>45</sup>

The US QT program is being executed on fixed specifications. According to the plan that was presented in September 2017, the Fed reduces its holdings of Treasuries and mortgage-backed securities by the following volumes:<sup>46</sup>

- USD 10bn per month in Q3 2017 ✓
- USD 20bn per month in Q1 2018 ✓
- USD 30bn per month in Q2 2018 ✓
- USD 40bn per month in Q3 2018 ✗
- USD 50bn per month from Q4 2018 onwards ✗

<sup>44</sup> See "Welcome to the Party, Powell", Grant Williams, *Things That Make You Go Hmmm...* <sup>45</sup> See "Advisory Board Discussion Q4 2017 – Narratives, De-Dollarization and Inflation", Incrementum AG

<sup>45</sup> See "Advisory Board Discussion Q4 2017 – Narratives, De-Dollarization and Inflation", Incrementum AG

<sup>46</sup> See "Policy Normalization", Fed<sup>47</sup> See "The Endgame", Dan Oliver, Myrmikan Research<sup>48</sup> An analogy from the field of sports: The national sport of the USA is baseball; in China, it is Go. The approach to foreign politics is similar: The Americans are known for their short-term "hit and run" foreign policy, whereas the Chinese play the long game in their foreign policy and are very difficult to read in doing so.

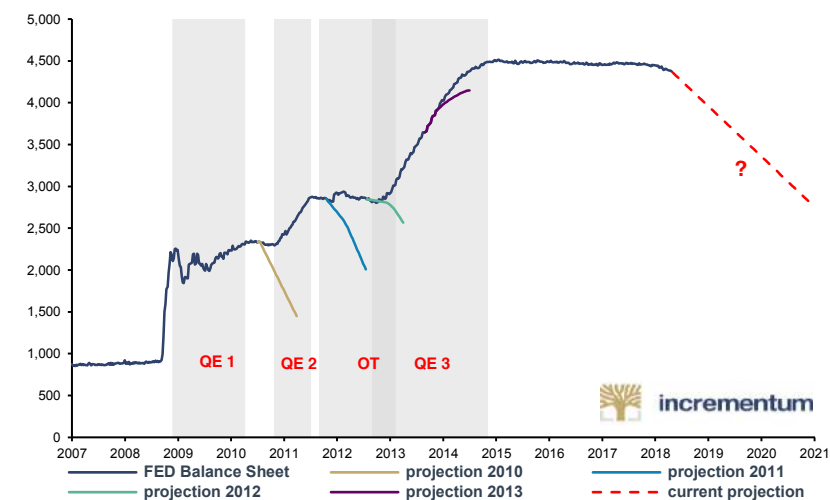


*“People vastly underestimated the power of QE. And they are in danger of doing the same with QT.”*

**Franz Lischka**

The plan is therefore for the Fed to shrink its balance sheet by USD 420bn in 2018 and by USD 600bn in 2019. The central bank’s money supply will be reduced by selling bonds and not refinancing them after expiry on the asset side, while writing off the corresponding amount of cash or, in most cases, deposits of commercial banks with the central bank on the liabilities side. This process will continue until the Fed decides that the balance sheet has gone back to “normal” or until the next crisis hits. So far, everything seems to be going according to plan: **The balance sheet of the Federal Reserve has recently fallen to its lowest level since June 2014.**

#### QE reversal



Sources: Federal Reserve St. Louis, Incrementum AG

*“Unlike gold, governments come and go. In a low-rate, high-debt world, gold is a safer bet.”*

**Charlie Morris**

**It is worth noting that the Fed’s balance sheet has drastically deteriorated over the past years, not only in quantitative but also in qualitative terms.** At the beginning of the 1970s, at the onset of a period of pronounced inflation, 23% of US Treasury bills came with a maturity of less than 90 days, and 1.2% of all bonds had a maturity of more than 10 years. The entire bond portfolio of the US central bank accounted for 68% of total assets; the rest were cash items in process of collection, foreign reserves, and gold. All in all, a diversified and solid balance sheet. At the moment, only 6% of assets come with a maturity of less than 90 days, and 26% have a maturity of more than 10 years. Government bonds in the portfolio account for 55% of assets, mortgage-backed securities for 40%. **From our point of view, this is not a robust balance sheet, especially not in an environment of rising interest rates and inflation.**<sup>47</sup>

<sup>47</sup> See “The Endgame”, Dan Oliver, Myrmikan Research<sup>48</sup> An analogy from the field of sports: The national sport of the USA is baseball; in China, it is Go. The approach to foreign politics is similar: The Americans are known for their short-term “hit and run” foreign policy, whereas the Chinese play the long game in their foreign policy and are very difficult to read in doing so.

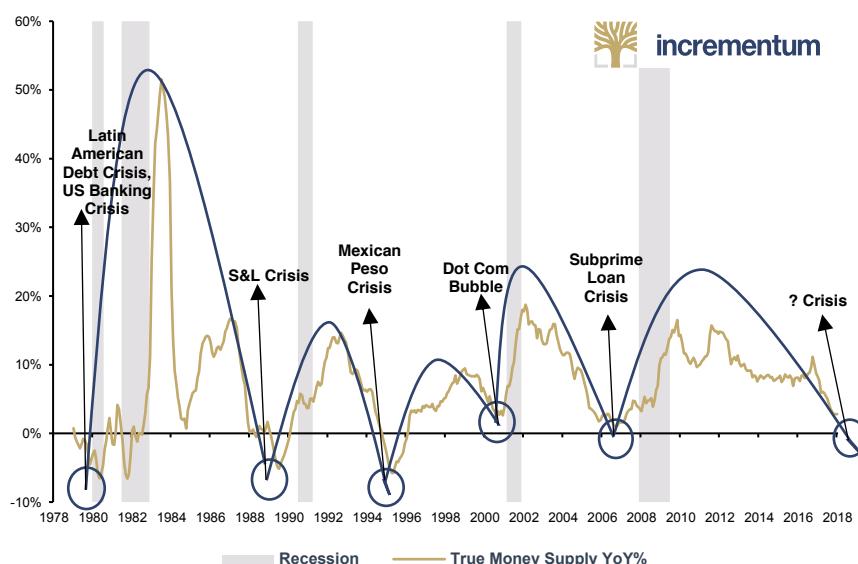
QT also means higher budget deficits. The US government pays interest on the bonds that the Fed holds. However, the interest is distributed again at the end of the year. De facto, the Fed acts as a transitory party, and the bonds do not carry interest. However, if the bonds are now divested, the government will lose out on this interest kickback.

**Technically, reducing the Fed's balance sheet is an easy task. Still, we are surprised at the carefree attitude of financial market participants.**

In our opinion, QT means rising interest rates, economic dampening, deteriorating credit quality, and probably also an increase in the susceptibility of the financial system to crises.

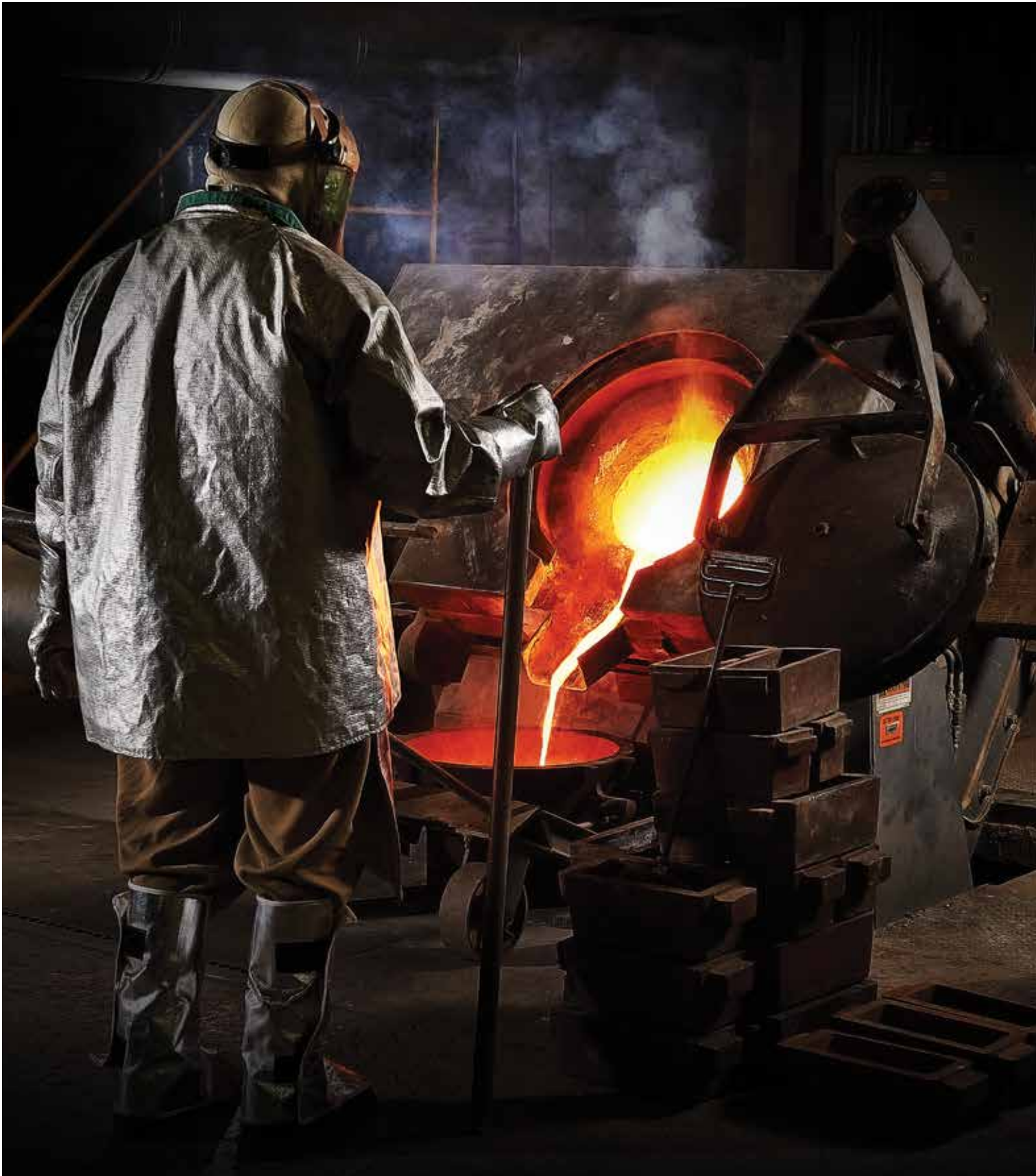
The following chart once again shows that every major economic crises of the past was each preceded by significant growth in the money supply - measured here with "True Money Supply", which is based on the monetary theory of the Austrian school. We would be surprised if "this time would be different".

True Money Supply YoY%



Sources: Michael Pollaro, Incrementum AG

Having had a look at some financial issues and the situation of the world's biggest economy, let us now move on to the second-biggest one.



**LEAGOLD MINING**

**LEAGOLD MINING** IS BUILDING A  
NEW MID-TIER GOLD PRODUCER  
FOCUSED ON LATIN AMERICA

TSX:LMC | OTCQX: LMCNF | [WWW.LEAGOLD.COM](http://WWW.LEAGOLD.COM)



## China – Sword of Damocles

*“The Chinese people have understood since ancient times that nothing is free. To be happy, one must fight for it.”*

Xi Jinping

Before we discuss the economic situation of China, a few words about China’s strongman, **Xi Jinping**. The “new Chinese emperor” has engineered a meteoric rise. He started off as simple rural laborer but is now the most powerful Chinese president since Deng Xiaoping. Such a career path requires strength, tact, and probably a dash of unscrupulousness.



Courtesy of Hedgeye

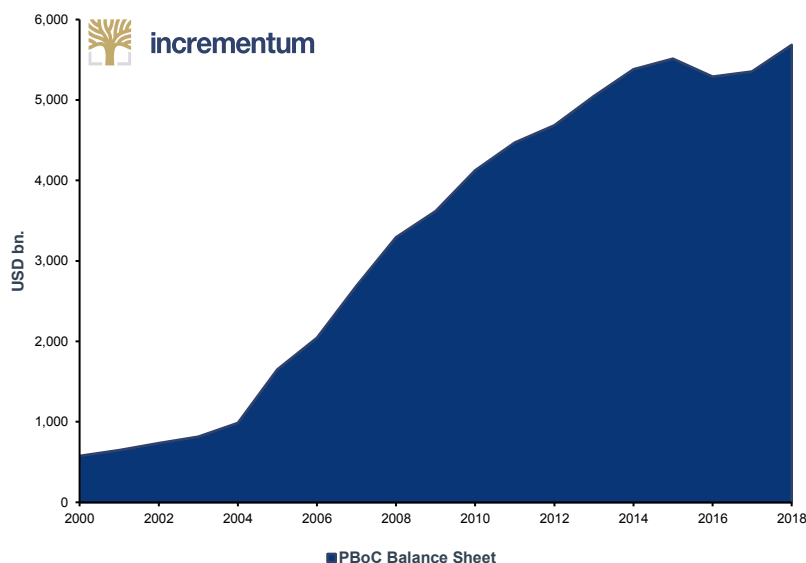
*“If we’re too optimistic when things go smoothly, tensions build up, which could lead to a sharp correction, what we call a Minsky Moment. That’s what we should particularly defend against.”*

**PBoC Governor Zhou Xiaochuan**

While the rulers of China have been able all along to hedge their plans over longer periods than their Western counterparts have, the new legal situation has extended this planning horizon even further.<sup>48</sup> In comparison with those of Western economies, China’s countermeasures against the crisis in 2008 were significantly more drastic. While in the US the balance sheet total of the banking system increased by USD 4,000bn in the years after the global financial crisis, the balance sheet of the Chinese banking system expanded by USD 20,000bn in the same period. **For reference: This is four times the Japanese GDP.**

<sup>48</sup> An analogy from the field of sports: The national sport of the USA is baseball; in China, it is Go. The approach to foreign politics is similar: The Americans are known for their short-term “hit and run” foreign policy, whereas the Chinese play the long game in their foreign policy and are very difficult to read in doing so.

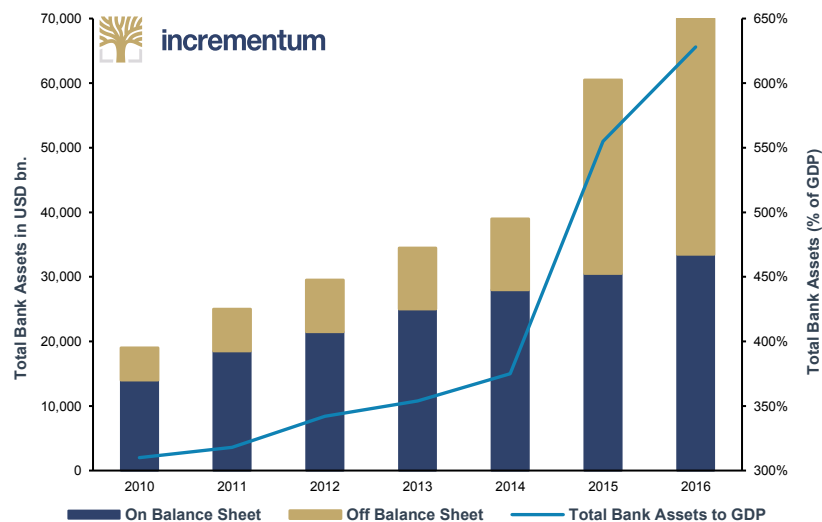
### PBoC balance sheet (USD bn)



Sources: PBoC, Incrementum AG

The following chart shows the expansion of the bank balance sheet total as compared to economic output. **Did the Chinese authorities assume excessive risks in fighting the crisis?**

### Assets of the Chinese banking system



Sources: PBoC, "China Financial Stability Report 2017", Incrementum AG

*"There is nothing riskier than the widespread perception that there is no risk."*

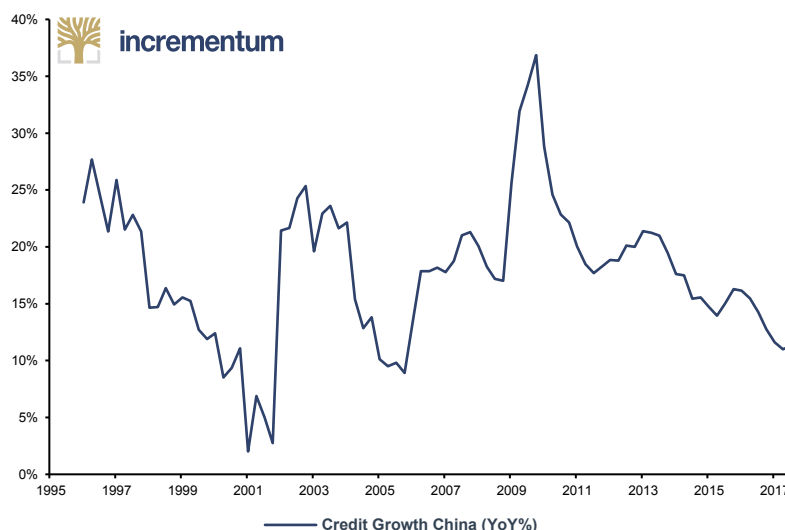
**Howard Marks**

Neither the fact that China's bank balance sheets amount to more than 600% of GDP nor the fact that they have doubled in terms of percentage of GDP in the past several years suggests a healthy development. Our friends from Condor Capital expect NPL ratios to rise in China, which could translate into credit losses of USD 2,700 to 3,500bn for China's banks, and this is under the assumption of no contagion (!). By comparison, the losses of the global banking system since the financial crisis have been almost moderate at USD 1,500bn.



The most recent crisis does teach us, however, that the Chinese are prepared to take drastic measures if necessary. China fought the financial crisis by flooding the credit markets: 35% credit growth in one year on the basis of a classic Keynesian spending program is no small matter.

#### Credit growth in China (yoy %)



Sources: Federal Reserve St. Louis, Incrementum AG

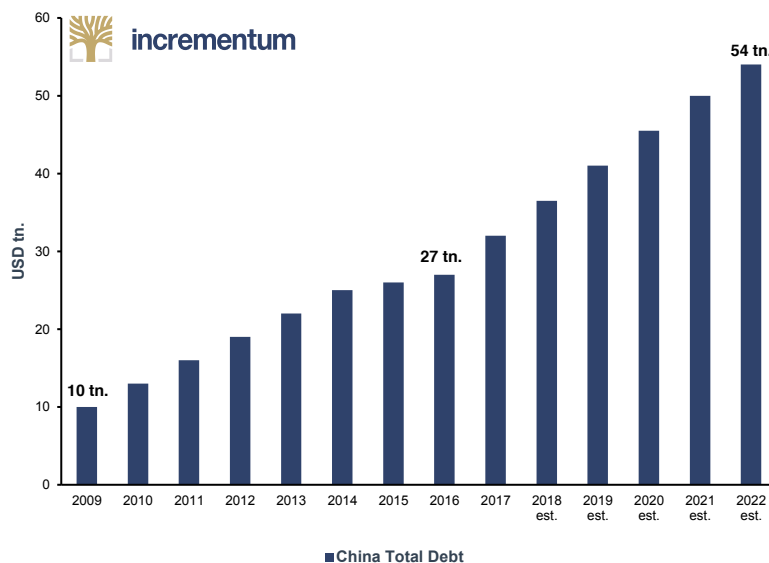
*“Chinese companies have taken on too much debt, and there needs to be less financial leverage.”*

**PBoC Governor Zhou Xiaochuan**

Chinese money not only inflates a property bubble domestically but also around the globe (e.g. in Sydney and Vancouver). Further support for the global property markets is in question, given the measures China has recently launched. Due to financial problems, Chinese groups such as Anbang and HNA will have to swap the role of buyer for that of seller.

The IMF has forecast a further doubling of total Chinese debt outstanding from USD 27,000bn in 2016 to USD 54,000bn in 2022. By comparison, in 2016 China's GDP amounted to USD 11,200bn. This spells **debt-induced growth at declining rates of marginal utility**. From our point of view, this development – which we can also see in the West – is unsustainable.

### Total debt China



Sources: CEIC, IMF, Incrementum AG

In its most recent report, “Credit Booms – Is China different?”<sup>49</sup>, the IMF states that in 43 cases worldwide of strong credit growth (i.e. the ratio of credit to GDP grows more than 30% over five years), only five cases ended up without a significant slowdown or a financial crisis. The IMF also points out that no expansion of credit that started at a debt to GDP ratio above 100% of GDP ended well. It is worth noting that China has a high percentage of domestic as opposed to foreign debt, which definitely makes matters easier for the country. But the question is: Will it be different for China this time?



Courtesy of Hedgeye

*“No centimetre of this wonderful country will be cut off from China.”*

**Xi Jinping**

The 19<sup>th</sup>-century Opium Wars that China fought with England, which are deeply rooted within the collective memory of the Chinese people, are historical events that are of great importance in connection with the punitive tariffs imposed by the US, as they remain a fixed and integral part of the Chinese history curriculum in schools.<sup>50</sup> If necessary, China could stir up anti-Western sentiment in order to implement measures that are hard on its own population, even if they are

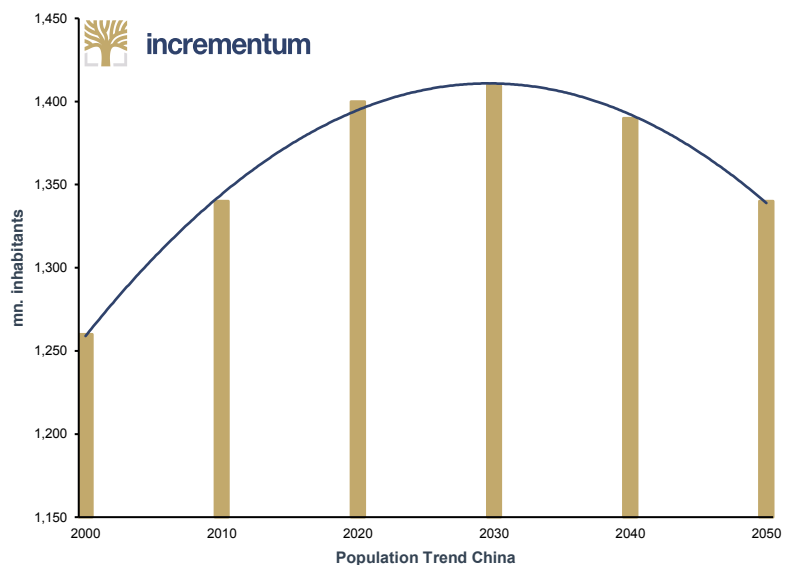
<sup>49</sup> See “Credit Booms—Is China Different?”, Sally Chen, Joong Shik Kang, IMF

<sup>50</sup> Recommended reading: *The Opium Wars*, by Julia Lovell

unpopular. The buck would of course stop with the Americans. Thus, the US could shoot itself in the foot with any escalation of the trade war, as we regard the ability to bear hardships and the cohesion of Chinese society as much stronger than those of the American society.

The demographic development of China is also worth a quick sidebar. The World Bank forecasts a population peak of 1.4bn for China in 2028.<sup>51</sup> The decline in population that is predicted to set in around that time should proceed at a similar pace as the increase towards the peak.

#### Development of the Chinese population



Sources: World Bank, Incrementum AG

*“Demography is destiny.”*

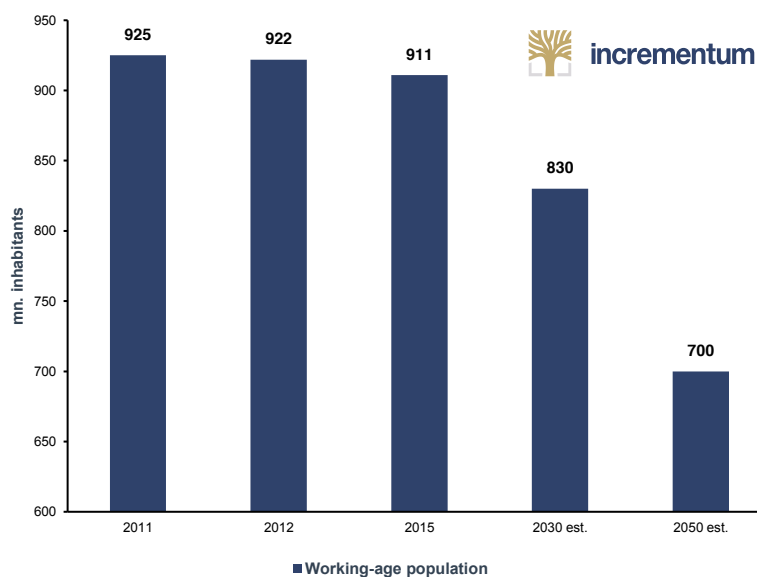
**Auguste Comte**

The fit-for-work population (aged 16 to 59) has been decreasing since 2012 and is expected to decline by almost 25% to 700mn by 2050.<sup>52</sup> Thus China, much like the West, has the problem of an aging population.

<sup>51</sup> See “China Population Projection 15-50”, The World Bank

<sup>52</sup> See “China’s working-age population will fall 23% by 2050”, World Economic Forum

## China's fit-for-work population



Sources: Chinese Ministry of Human Resources and Social Security, Incrementum AG

“What we now face is the contradiction between unbalanced and inadequate development and the people’s ever-growing needs for a better life.”

**Xi Jinping**

### Conclusion

Unlike his Western competitors, China’s new strongman, Xi, can implement his long-term strategy in a targeted and gradual fashion. Xi explicitly underlined his goal of asserting China’s interests in the world by referring to military, economic, political, and diplomatic means in his speech at the National Congress in October 2017.<sup>53</sup> He left no doubt that China was not willing to compromise in any shape or form with regard to its territorial integrity (N.B. Taiwan, Hong Kong, Tibet), and he issued point-blank threats against separatist tendencies.

However, the transformation of the economy could (intentionally or otherwise) cause economic distortions not only in China but globally. Recent years have been dominated by a massive expansion of credit. In fact, it is often said that China has blown the biggest credit bubble in history.

It seems, there are greater similarities between China and the US than may be visible at first glance. **China builds real estate for a shrinking population, invests for an overindebted client (the US, which even insists on a drastic reduction of the bilateral trade deficit) and finances all this with money it does not have.**<sup>54</sup>

<sup>53</sup> See “Xi Jinping warns any attempt to split China is ‘doomed to fail’”, BBC

<sup>54</sup> A paraphrase of the famous quote from “Fight Club”: “We buy things we don’t need with money we don’t have to impress people we don’t like.”



**ASSET RICH**  
**LEVERAGE TO GOLD, SILVER & COPPER**  
**HIGH BETA TO GOLD**

**Rob McEwen**  
**Ownership**  
**24%**

**Gold Bar, Nevada**

Under Construction  
+60koz Gold 2019

**Black Fox, Timmins, Canada**

48koz Gold 2018  
Strategic Land Position

**El Gallo, Mexico**

Silver Project  
Gold - Sulfide Project

**Los Azules, Argentina**

Huge Copper Asset  
2017 PEA - 36 Year Mine Life

**San José, Argentina**

+90koz Gold Eq. / Year  
High Grade Silver-Gold Mine



info@mcewenmining.com | 647.258.0395 | mcewenmining.com

## Conclusion

*“Some ‘overestimation’ of tail risk is not irrational by any metric, as it is more than required overall for survival.”*

Nassim Taleb

**In this chapter, we have scrutinized a range of different risks. The expansion of the money supply and the excessive expansion of debt have made the state of the world financial system ever more fragile.**

Given that central banks want to reduce liquidity in the future and cut interest rates, rising volatility and weak balance sheets are likely for individual companies.

After looking at some of the straws that could break the camel’s back, we now want to discuss the question of what sort of protection against the aforementioned crisis scenarios gold can provide. We spoke at length about the “antifragility” of gold in our *In Gold we Trust* report of 2016.<sup>55</sup> **Our thoughts on the main factors that should enter the assessment of whether gold is antifragile (and if so, to what degree) were the following:**

- The value of gold is based on its trust capital; this aspect does not help in judging whether gold is antifragile.
- In the past, gold has been the most durable form of money: Although gold is not a completely antifragile good, it has shown antifragile traits in the past in times of severe stress. Gold is intrinsically durable: In this respect, gold has to be regarded as robust.
- Gold is liquid even in situations of stress: In this respect, gold must be regarded as robust.
- Gold maintains an inverse relationship to the monetary system. The simple verdict: Gold is clearly antifragile.
- Black swans also exist in the gold universe, but we consider their destructive potential to be limited: Our final verdict: Gold is “generally robust”.

**We have come to the conclusion that gold is a multidimensional asset.**

It has to be regarded as robust with respect to its physical durability, its high liquidity, and its solid base of trust. Also, the effects of worst-case scenarios in the form of gold prohibition or competition from cryptocurrencies would probably not be disastrous. Of course the gold price can overheat, fall sharply, or remain low for prolonged periods of time; so gold is fragile to that extent. **But the most important features of gold, i.e. its inverse relationship to the monetary system and the fact that it offers effective protection against inflation and crises – especially in situations that cannot be anticipated in detail – do make it antifragile for all intents and purposes.**<sup>56</sup>

<sup>55</sup> See “Anti-fragile investing with gold?”, *In Gold we Trust* report 2016, pp. 100-106

<sup>56</sup> Ibid.





# The Portfolio Characteristics of Gold

*“Gold is the anti-complex asset, and therefore the one asset that an investor should own in a complex world.”*

Jim Rickards

## Key Takeaways

- Goldman Sachs, Price Waterhouse Coopers, and the CPM Group confirm the insights presented in previous *In Gold we Trust* reports.
- Although a century has passed since the gold standard was abolished, gold continues to play an important role as a reserve asset in central bank portfolios.
- As was the case in previous centuries, gold remains indispensable to inspire confidence in a currency and to guarantee its stability.
- The tide turns: Since the 2008 financial crisis, central banks in emerging markets have been accumulating gold reserves and have become major players in the market.

**The analysis of the portfolio characteristics of gold is a regular feature of our annual *In Gold we Trust* reports.** We continue this tradition in this year's report as well, and provide interested readers with additional insights on the subject of "gold in a portfolio context".

The following section opens with a discussion of the role of gold for private investors. However, the main focus of this year's report is an examination of gold in the "portfolios" of central banks. We consider the relevance of currency reserves for central banks, then discuss the significance of gold reserves in particular, and take a look at the trends, size, and distribution of official gold reserves held by central banks.

## The Role of Gold for Private Investors

*"When I look at the monetary system today, it presents itself as unpredictable inevitability. It is inevitable that the system has to get reorganized but it is unpredictable as to how and when it is going to happen. So what does one do? One has to have insurance and physical gold has a proven record of being the most effective insurance available."*

Simon Mikhailovich

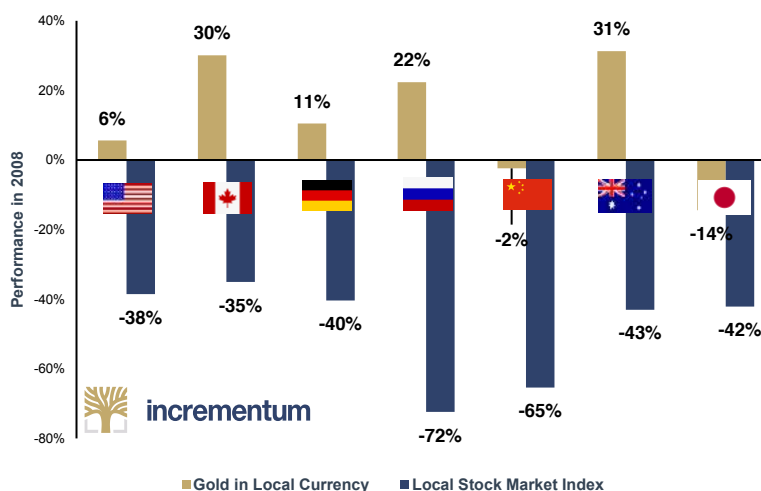
"Gold: The Story of Man's 6000 Year Obsession"

We have examined the extraordinary portfolio characteristics of gold quite thoroughly in previous years, and arrived at the conclusion that gold should be considered an important addition to investment portfolios.<sup>57</sup> As you can see on the following chart, gold outperformed all major stock markets significantly in 2008. Gold has therefore done his job as portfolio stabilizer perfectly.

<sup>57</sup> Regarding an analysis of the extraordinary portfolio characteristics of gold, the relationship between gold and interest rates as well as the opportunity costs of holding gold, see the *In Gold we Trust* report 2015.



### Gold vs. Stocks 2008 (both in local currency)



Sources: BMG Bullion, Goldprice.org, Yahoo.Finance, Incrementum AG

The fact that gold is an excellent diversifier and a hedge in crisis situations is known not only to “gold bugs” but is also accepted by a number of heavyweights in the “mainstream” of the financial industry. The conclusions reached by Goldman Sachs, PwC, or the CPM Group in their analyses are similar to ours. Thus PwC confirmed the analysis of the negative correlation between equities and gold we published last year:<sup>58</sup>

*“Among alternatives, when examining the correlation of returns with the S&P 500 Index, gold is an excellent diversifier, presenting the lowest correlation on a five-, ten- and twenty- year basis.”<sup>59</sup>*

Well-known research house CPM Group examined 450 different portfolios and ultimately came to the following conclusion:

*“It can be said that adding gold to a portfolio of stocks and bonds has the greatest benefit to the risk return profile of a portfolio. While the addition of any precious metal or combination of precious metals improves the return-to-risk ratio of a portfolio, the addition of only gold to a portfolio **pushed up the return-to-risk ratio the highest.**”<sup>60</sup>*

*“The truth is that gold cannot be simply defined as a currency, commodity, inflation hedge or safe haven. At various times it has been some/all of these things and at other times none of these things.”*

**Charlie Bilello**

**Even Goldman Sachs has acknowledged the merits of investing in gold these days.** In its very interesting *Precious Metals Primer*, Goldman Sachs states that gold is not just a “historical accident” or a barbarous relic but has established itself in the marketplace quite naturally on account of its physical characteristics. Goldman Sachs notes furthermore that gold is negatively correlated with other asset classes, particularly in times of high price inflation and during recessions, which makes it extremely suitable as a portfolio addition:

<sup>58</sup> The *In Gold we Trust* 2016 report included an analysis of gold as a portfolio hedge. Last year the focus was on our study of the relationship between gold and (a) the US dollar, (b) real interest rates, and (c) equities. See our analysis in the *In Gold we Trust* report 2017, section “Gold and Equities”, p. 135-136

<sup>59</sup> See the analysis entitled “[The rising attractiveness of alternative asset classes for Sovereign Wealth Funds](#)”

<sup>60</sup> *Precious Metals Quarterly*, CPM Group, October 10, 2017, p. 8



*“Adding gold to a standard portfolio provides an excellent trade-off between boosting risk-adjusted returns and avoiding excessive downside.”<sup>61</sup>*

Gold is especially useful as an addition to traditional 60/40 portfolios (those that have a 60% equity, 40% bond weighting).

Performance comparison	Portfolio variety				
	Standard	+10%	+10%	+10%	+10%
	60/40 PF	Gold	GSCI	US 30Y	Cash
Annualized return (Real):	4.62%	4.64%	5.08%	4.26%	4.33%
Annualized return (Nominal):	8.69%	8.72%	9.35%	8.32%	8.39%
Volatility:	9.75%	9.01%	9.35%	9.36%	8.78%
Return/Volatility ratio:	0.89%	0.97%	1.00%	0.92%	0.96%
Downside volatility:	9.93%	9.30%	9.82%	9.53%	8.91%
Sortino ratio:	0.88%	0.94%	0.95%	0.87%	0.94%

Sources: Goldman Sachs, Bloomberg, Incrementum AG

*“Always keep your portfolio and your risk at your own individual comfortable sleeping point.”*

**Mario Gabelli**

Adding gold to a 60/40 portfolio is particularly useful in order to achieve a decrease in volatility and an improvement in the return-risk ratio. Moreover, in contrast to cash, gold boosts nominal returns. This positive effect exerted by a gold allocation is primarily attributable to the fact that, compared to bonds, gold is far better suited as a hedge against a decline in stock prices. We have discussed this fact at great length last year, when we examined the relationship between gold and the S&P 500 Index.<sup>62</sup> Nevertheless, because of its importance, we want to briefly address the inverse correlation of gold and equities again here.

The next table shows the performance of government bonds, currencies, cash, and gold during bear markets in the S&P 500 Index (defined as declines in excess of 20%). With an average gain of +7.6%, gold is quite an effective hedge against price declines in the stock market and beats all other alternatives on that basis. However, the table also reveals that gold is not *always* able to rally during equity bear markets. Other factors specific to the circumstances in play will affect market reactions, a fact that has to be taken into account when adding gold to a portfolio.

<sup>61</sup> “Precious Metals Primer – Fear and Wealth”, Goldman Sachs, October 17, 2017

<sup>62</sup> See our analysis “Gold and Equities” in the *In Gold we Trust* report 2017

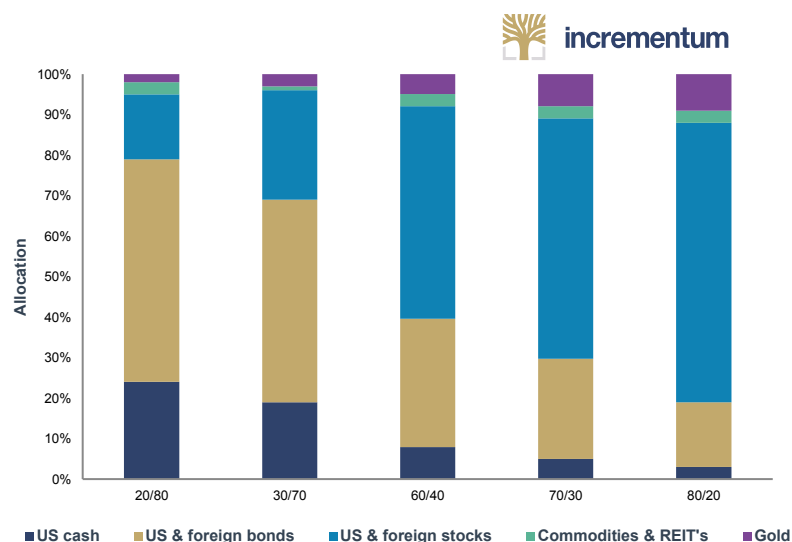


Government bonds								
			(local currency)			FX		
Start	Trough		US 10Y	Germany	Japan	CHF	JPY	Cash Gold
Aug 56	Oct 57		-5%					0% -4%
Dec 61	Jun 62		3%	3%			-1%	1% -1%
Feb 66	Oct 66		-2%	-3%			-3%	0% -3%
Nov 68	May 70		-15%	-13%	1%		-8%	3% -19%
Jan 73	Oct 74		-16%	-14%	-24%	7%	-16%	-2% 100%
Sep 76	Mar 78		-3%	21%	20%	20%	11%	-2% 40%
Nov 80	Aug 82		5%	-2%	8%	-30%	-28%	12% -53%
Aug 87	Dec 87		0%	1%	1%	9%	7%	1% 4%
Jul 90	Oct 90		-3%	-4%	-6%	7%	11%	0% 5%
Jul 98	Aug 98		4%	4%	4%	4%	-1%	1% -7%
Mar 00	Oct 02		27%	14%	6%	3%	-18%	4% 6%
Oct 07	Mar 09		21%	16%	5%	0%	16%	1% 22%
Apr 11	Oct 11		15%	14%	2%	-6%	5%	-1% 7%
Average			2.2%	3.1%	1.7%	1.6%	-2.1%	1.4% 7.6%
Median:			-0.3%	1.9%	2.9%	4%	-0.9%	0.5% 3.9%

Sources: Goldman Sachs, Incrementum AG

**The merits of gold as a portfolio addition are not only evident in 60/40 portfolios but are also discernible in a wide variety of different weightings of equities and bonds.** This applies for example to 20/80, 30/70, and even 70/30 or 80/20 equity/bond portfolios. The World Gold Council has back-tested the performance of different combinations of weightings of portfolio components consisting of cash, stocks, bonds, gold, and a small amount of other commodities.<sup>63</sup>

### Stocks and bonds portfolios



Sources: Goldman Sachs, Incrementum AG

*“Gold is not a historical accident.”*

**Goldman Sachs**

As the table illustrates, gold allocations in a range of 2% to 9% maximize risk-adjusted returns. This reflects a well-known pattern: The greater the weighting of stocks in a portfolio, the more gold should be added to it.

<sup>63</sup> See World Gold Council



Scenario	20/80	30/70	60/40	70/30	80/20
U.S. Cash	24%	19%	8%	5%	3%
U.S. & Foreign Bonds	55%	50%	32%	25%	16%
U.S. & Foreign Stocks	16%	27%	53%	60%	69%
Commodities & REITs	3%	1%	3%	3%	3%
Gold	2%	3%	5%	8%	9%

Sources: Goldman Sachs, Incrementum AG

**It appears as though the insight that gold is a valuable portfolio component is slowly but surely gaining traction again. However, practical implementation is often lacking.** In this year's report we will examine more closely the extent to which gold is already taken into consideration by today's market participants. Our major focus this year is on the "portfolios" of central banks.

## The Role of Gold for Central Banks

*"If the dollar or any other currency would be universally accepted at all times, central banks would see no necessity to hold gold at all. The fact that they do so, shows that such currencies are not a universal replacement for gold."*

Alan Greenspan

*"The inevitable conclusion is that a true gold standard has so far been the only example of a satisfactory international monetary order, and no one has succeeded in finding a suitable replacement."*

**Wilhelm Roepke**

**Central banks are in a unique position in the modern fiat money system.** With their monetary policy interventions and the government-guaranteed currency monopoly, they influence global financial markets and the business cycle decisively. This is more than enough reason for us to analyze the behavior of these supposed stewards of the monetary system in detail. In the following section we take a look at "central bank portfolios" in order to shed light on the part gold plays in them.

We should begin by explaining what a "central bank portfolio" actually represents. Conceptually, the "portfolio" of a central bank comprises assets "backing" the money it has issued. Under a classical gold standard, 100% of the money certificates issued would be backed by gold. **Given that more than a century has passed since the classical gold standard was abolished and that following the suspension of the Bretton Woods system in 1971 the last tie between government money and gold was severed, it is quite interesting to see that gold continues to play a crucial role as a monetary reserve asset.**

The following table shows a simplified central bank balance sheet, modeled after the balance sheets of the German Bundesbank and the ECB.



### Central bank balance sheet: simplified illustration

#### Assets

#### Liabilities

<ul style="list-style-type: none"> <li>I. Gold and foreign exchange reserves</li> <li>II. Claims from monetary operations</li> <li>III. Other Receivables</li> <li>IV. Securities</li> <li>V. Other Assets</li> </ul>	<ul style="list-style-type: none"> <li>I. Banknotes in Circulation</li> <li>II. Deposits from Banks</li> <li>III. Capital and Reserves</li> <li>IV. Other Liabilities</li> </ul>
---	--

Sources: ECB, Incrementum AG

*"It was not the gold standard that failed, but those to whose care it had been entrusted."*

**Heinrich Rittershausen**

Currency reserves are part of the balance sheet line item "Gold and foreign exchange reserves" on the asset side. This line item comprises all kinds of currency reserves. While in the past gold reserves were held as backing for the banknotes issued by central banks, in our current monetary system, currency reserves have the following functions: They

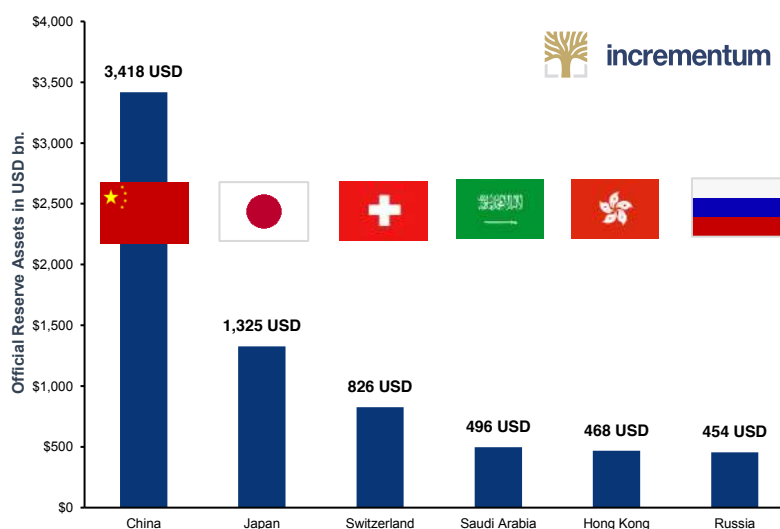
- enable intervention in financial markets (particularly foreign exchange markets)
- strengthen confidence in a currency
- serve as a hedge or reserve in times of crisis.

Especially, hedging against crises and inspiring confidence in a currency are key features, as they signal stability and future planning security to other market participants.

### Comparison of Portfolios

Having looked at bank portfolios and their composition, we now take a closer look at the size of currency reserves. The following chart shows the size of the official currency reserves of the six nations holding the largest reserves.

### Countries with the largest currency reserves (in USD bn)

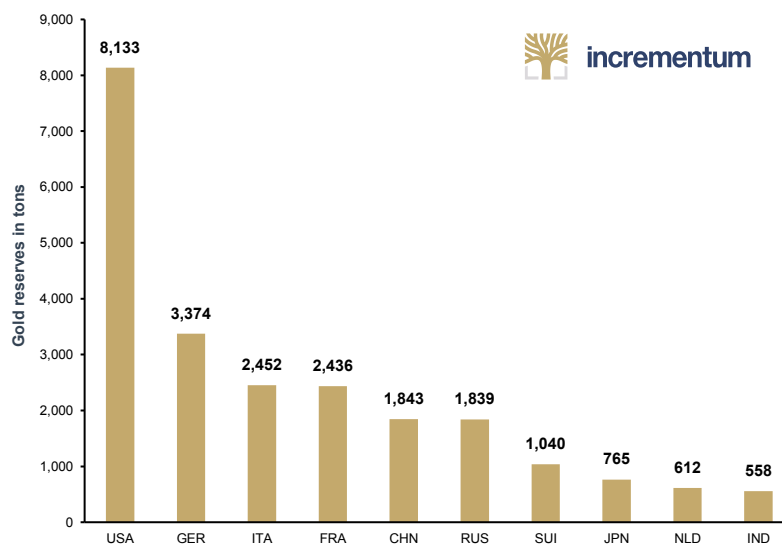


Sources: IMF, Incrementum AG

It is interesting that apart from large economies such as China, Japan, or Russia, several rather small countries such as Switzerland, Saudi Arabia, and even Hong

Kong are on the list of countries with the largest monetary reserves. Surprisingly, leading economies such as the US or Germany do not make the cut. We will discuss the reasons for this below. **A completely different picture emerges if we confine ourselves to comparing gold reserves.**

#### Countries with the largest gold reserves



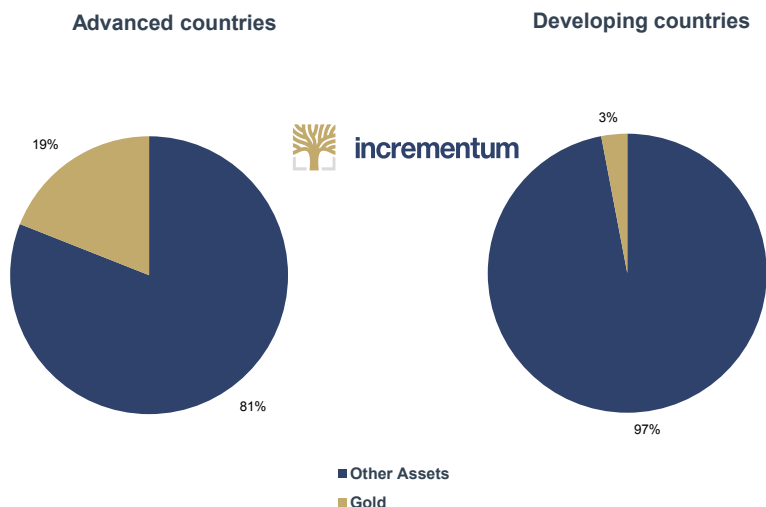
Sources: World Gold Council, Incrementum AG

*“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. (...) It’s been said that gold is built into man’s DNA.”*

**Richard Russell**

It can be seen that industrialized nations tend to have relatively large gold reserves at their disposal. Thus the US reports the largest gold reserves in the world but ranks far behind a plethora of nations – even small countries such as the Czech Republic and Thailand – in terms of foreign exchange reserves. It is the other way around with China, which holds the largest foreign exchange reserves in the world but is only in fifth place with respect to gold reserves. It is quite conspicuous that Western developed countries tend to hold significantly larger gold reserves than emerging-market nations that are still in the process of catching up economically. The following chart illustrates this situation.

## Share of gold in total currency reserves



Sources: World Gold Council, Incrementum AG

The proportion of total currency reserves consisting of gold holdings amounts to 19% among industrialized nations, which exceeds the 3% reported by emerging markets by a large margin. In light of this it is perhaps not too big a surprise that Kenneth Rogoff recommended in 2016 that emerging-market governments should massively expand their gold reserves.<sup>64</sup> This substantial difference is primarily attributable to (a) monetary history, (b) financial market-related factors, and c) monetary policy factors.

### a) Monetary History

Central banks of industrialized nations currently still have large gold reserves on their balance sheets, which were either accumulated via export surpluses in the Bretton Woods era (e.g. in the case of Germany) or can be traced back to the former gold backing of banknotes issued under the classical gold standard. The economic ascendance of emerging-market economies and the export surpluses often associated with them started only in the late 20<sup>th</sup> century, though, long after the reign of “King Dollar” had begun.

In a de facto dollar-based global monetary order, it makes sense to hold the currency most widely accepted in international trade as a reserve and a hedge against crises. It is particularly important for large commodity importers such as China or Japan to hold dollar-denominated foreign exchange reserves as long as most commodities are still traded in USD. Hence emerging markets accumulated ever larger amounts of dollar reserves from the 1980s until well into the new millennium. The outlook of central bankers in Southeast Asia was shaped by the financial crisis of 1997, which provided them with a strong motive to focus on the acquisition of dollar reserves.

*“(…) if the gold standard were in place today we would not have reached the situation in which we now find ourselves.”*

**Alan Greenspan**

<sup>64</sup> “Emerging Markets Should Go for the Gold”, Kenneth Rogoff, Project-Syndicate.org

## b) Financial market-related factors

A sine qua non for a reserve currency is that a sufficient number of top-rated and highly liquid investment instruments are denominated in it and are tradable in financial markets. According to received financial market wisdom, US Treasury bonds continue to be seen as risk-free instruments and enjoy enormous liquidity. Moreover, central banks are inclined to invest their reserves in fixed-income instruments, at least in times of positive real yields.

## c) Monetary policy factors

Beyond the two reasons cited above, central banks hold currency reserves in order to be able to intervene in foreign exchange markets. The SNB has stood out in this respect in recent years, as it attempted – ultimately without success – to artificially devalue the Swiss franc by pegging it to the euro. The manipulation of exchange rates is also associated with the political debates over “exorbitant” trade surpluses and deficits. The issue received its fair share of international attention well before Donald Trump took it up and imposed a number of initial protectionist measures.

Institutions such as the IMF and the European Commission regularly admonish countries that post trade surpluses in excess of 6% of GDP. Trump’s rushing ahead rather aggressively and imposing punitive tariffs is a new wrinkle, which rightly raises concerns that his actions could trigger a global tit-for-tat protectionist spiral.

*“Bullion doesn’t pay interest or dividends, nor does it grow or expand by itself. That’s the price you pay for tranquility.”*

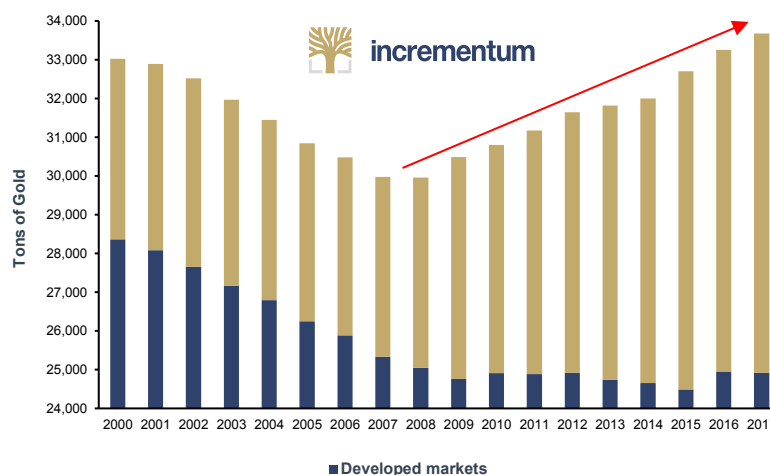
**Pierre Lassonde**

Another monetary policy-related reason for holding currency reserves is the fact that they boost the public’s confidence in a nation’s currency. If a central bank holds large currency reserves, it signals that it has the financial wherewithal to impose unconventional measures. This applies particularly to relatively “young” currencies. Established currencies such as the euro or the US dollar have a significant advantage in this respect due to their international standing.

## Is gold the admission ticket to negotiations over a new global monetary order?

Although industrial nations historically hold the largest gold reserves, a change in trend is discernible in emerging markets. Gold is becoming an increasingly important component of the official currency reserves of these countries.

### Trend in official gold reserves



Sources: IMF-IFS, World Gold Council, Incrementum AG

*"I never said the central bank is independent!"*

**Alan Greenspan**

**As the chart above shows, the financial crisis of 2008 marked a turning point.** While the gold reserves of central banks steadily declined until 2008, they have been rising ever since. Even more remarkable is the fact that the entire increase is due to gold reserve accumulation by emerging-market central banks. While gold reserves held by developed countries have fluctuated around the 25,000-ton level, gold reserves of emerging markets have increased consistently since reaching a low in 2006. From a total of 4,596 tons in 2006 they rose to 8,755 tons in 2017. This is a quite stunning 90.82% increase. In recent years the central banks of emerging-market economies were very important investors at the margin.

*"Diplomacy is the art of telling people to go to hell in such a way that they ask for directions."*

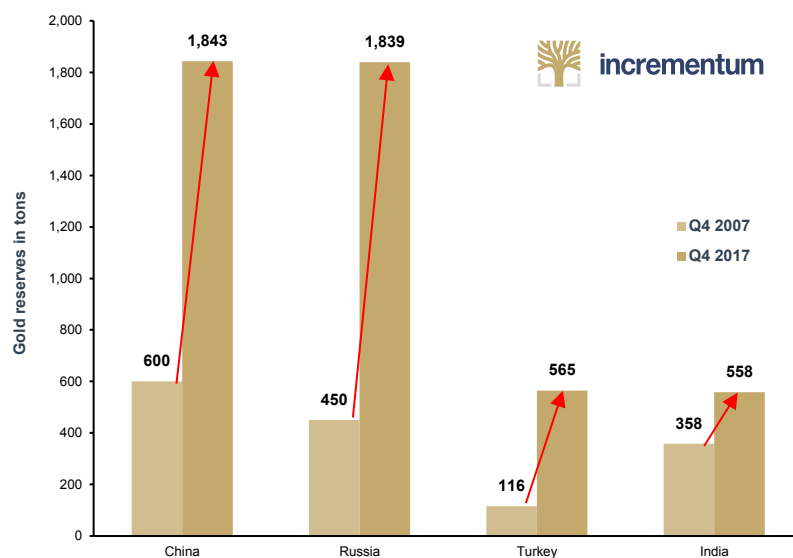
**Winston Churchill**

**The increase in gold reserves should be seen as strong evidence of growing distrust in the dominance of the US dollar and the global monetary and credit system associated with it.** Apart from economic interests, geopolitical interests and power aspirations play a very important part in this context as well. In recent years the governments of countries such as China, Russia, Iran, and even Turkey have frequently and more or less openly questioned the US-dominated global economic order. Their distrust is reflected in the steady expansion of their gold reserves. The following chart illustrates this by showing the change in gold reserves held by China,<sup>65</sup> Russia, India, and Turkey over the past decade:

<sup>65</sup> We actually assume that China's gold reserves are significantly higher than officially reported. For the reasons for this assumption, see the section *"China and the Importance of Gold"* in the *In Gold we Trust* report 2014.



### History of gold reserves



Sources: World Gold Council, Incrementum AG

*“America is losing its status as the world’s hegemonic power – just as Britain did before it.”*

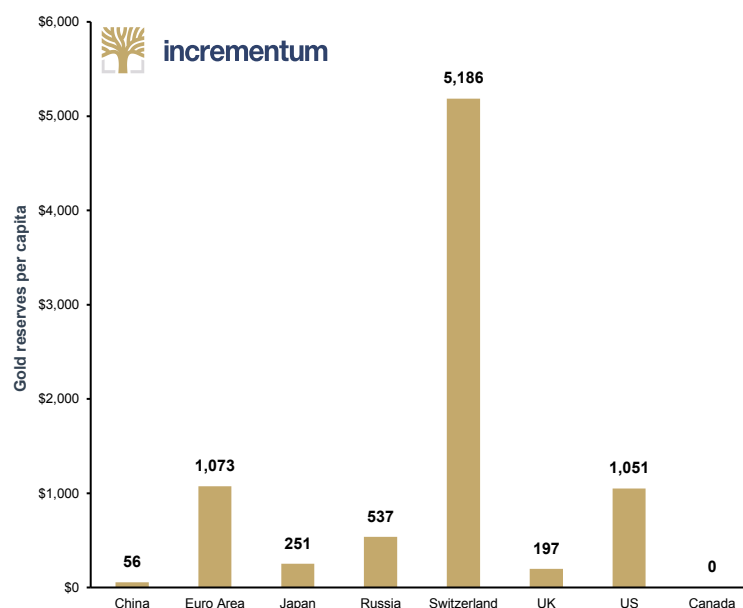
**Stanley Fischer**

**China, Russia, and Turkey in particular have boosted their central bank gold holdings substantially since 2007, namely by 307% (China), 408% (Russia), and 486% (Turkey).** In Q4 2007 China, Russia, Turkey, and India together held 1,524 tons of gold, which represented just 5.1% of total official gold reserves at the time. In Q4 2017 their combined reserves amounted to 4,804 tons, or 14.3% of total official gold reserves.

As absolute numbers sometimes tell us very little about the actual dissemination of gold in an economy, we will take a look at a few relative numbers. The next chart shows official gold reserves per capita:



### Central bank gold reserves per capita (in USD)



Sources: Santiago Capital, Statista, Incrementum AG

*“If the United States would take this first step towards 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.”*

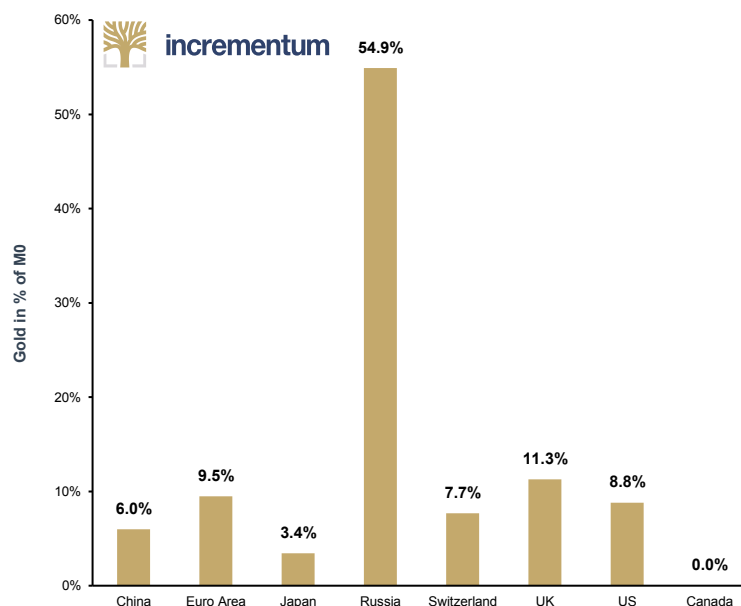
**Judy Shelton**

**In this comparison Switzerland is a clear standout with a formidable level of USD 5,186 per inhabitant.** Gold reserves per capita in the Eurozone of USD 1,073 and in the US of USD 1,051 are also relatively high compared to those of other countries. It is remarkable that the central bank of Canada, a country that was actually the fifth-largest global gold producer in 2015, holds no gold reserves at all.

A disadvantage of looking at per capita gold reserves is that – as is the case with the Swiss franc – the monetary asset or currency is not only used by national residents, there is a demand for it in other countries as well, whether due to its high liquidity or its perceived suitability as a store of value.

Another very interesting indicator is the extent to which the monetary aggregate Mo is covered by gold reserves on the books of central banks. The next chart shows the percentage of legal tender and bank reserves covered by official gold reserves:

### Central bank gold reserves as a percentage of M0



Sources: Santiago Capital, Statista, Incrementum AG

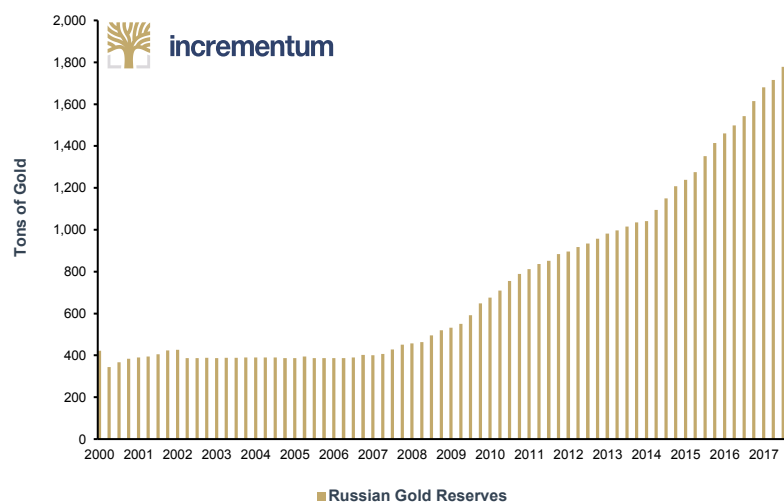
*“While I live I will never resort to irredeemable paper.”*

**Napoleon Bonaparte**

A look at the most important currency areas reveals several surprises. The monetary base of the Russian ruble has by far the highest gold coverage ratio at almost 55%. The fact that the British pound follows in second place with a coverage ratio of 11.3% is somewhat surprising as well, considering that the BoE sold half of its gold reserves at the turn of the millennium.

Generally, though, in most currency areas only a tiny fraction of even the smallest monetary aggregate, M0, is actually covered by official gold reserves. Thus the value of legal tender rests largely on the fact that it can be used in transactions. On the other hand, the example of Russia shows that the degree of gold cover of the monetary base is by no means carved in stone. **A lot can be achieved if monetary authorities have the required political will, as the recent history of Russia’s gold reserves reveals:**

### Russian gold reserves (tons)



Sources: Bloomberg, World Gold Council, Incrementum AG

*“Gold is the sovereign of all sovereigns.”*

**Democritus**

While official gold reserves initially remained by and large constant after the fall of the Soviet Union until 2006, they have been in a steady uptrend since then. The accumulation of reserves has accelerated significantly since the beginning of the Ukraine crisis in 2014, in the wake of which Western countries imposed economic and financial sanctions on Russia.



philoro  
EDELMETALLE

Freiheit braucht Sicherheit



happy. for sure. philoro.

Those who are happy, do not know any worries. Lay the foundation for a future full of happy moments: Invest your money in gold. philoro offers state of the art security for your transactions and deposit safekeeping at the best terms on the gold market. **Trust the test winner.**

[www.philoro.at](http://www.philoro.at) • [www.philoro.de](http://www.philoro.de) • [www.philoro.li](http://www.philoro.li) • [www.philoro.com](http://www.philoro.com)

## Monetary Policy Targeting the Gold Price: An Extraordinary Idea for Extraordinary Times

*“In our time, the aureate has become brazen—the golden has become brass. A return to true value based on trust is long overdue.”*

Jim Rickards

The possible revival of gold as a reserve asset also includes the extraordinary proposal made by Jim Rickards, an internationally renowned bestselling author and also a member of our Advisory Board.<sup>66</sup> The implementation of this proposal would have a serious impact on the price of gold and on the balance sheets of those central banks in particular that own significant gold reserves.

*“Successful financial repression requires a widespread belief that conventional government bonds are safe.”*

**Peter Warburton**

The starting point for Rickards’ considerations is the fact that the unconventional measures taken by the central banks in the wake of the financial crises of 2008 have indeed eliminated the liquidity bottleneck that initially occurred on the interbank market. However, the central banks did not lose sight of their own monetary policy objective of achieving a price inflation rate of around 2%. However, despite an (artificially) booming economy, falling unemployment and historically low interest rates, this target remains out of reach.

On the one hand, commercial banks were reluctant to lend, which prompted many central banks to charge negative interest rates on the sharply higher reserves held by commercial banks at their deposit facilities. In the euro area, for example, the level of commercial bank reserves held at the deposit facility with the ECB, has in the meantime risen to over EUR 800 bn since 2012. In order to make this liquidity available to the markets, the interest rate on reserves was gradually lowered until negative interest rates were finally set.

*„Along with encouraging borrowing, low and falling interest discourages savings. Isn’t that perverse, to discourage saving? What happens when an entire society doesn’t save?”*

**Keith Weiner**

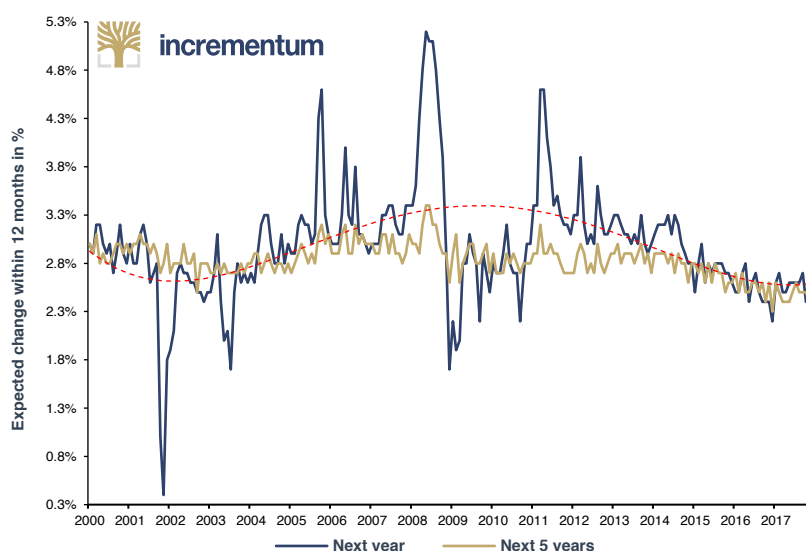
**Since March 2016, credit institutions have had to pay a -0.40% interest penalty on reserves on deposit with the ECB.** The negative interest rate is supposed to encourage commercial banks to lend to the markets. This additional liquidity is held to subsequently move consumer prices in the direction of the desired inflation target. However, because on the other hand the demand for credit was restrained for a long time, conventional monetary policy measures no longer worked. Despite the rapid increase in the monetary base, which was reflected in a sharp increase in money supply growth as well, commercial banks continued to be reluctant to expand their net inflationary lending across the euro area as a whole.

**After years of flooding the markets through various QE programs, the central banks are now taking the first tentative steps toward normalization of monetary policy.** The ECB has more than halved its monthly securities purchases from their peak, while the Federal Reserve has already hiked rates six times and has begun to reduce liquidity built up through its QE programs by gradually curtailing reinvestment of the proceeds from maturing

<sup>66</sup> [Incrementum Advisory Board](#)

bonds. According to orthodox theory one would expect that “QT” (quantitative tightening)<sup>67</sup> as initiated in the US will have a dampening effect on consumer prices, i.e., the Fed’s inflation target is likely to move even further out of reach. Moreover, the fact that inflation expectations are declining both in the population at large and among market participants is not exactly helpful with respect to the central bank’s attempt to achieve a target inflation rate of 2%.

#### Inflation expectations according to consumer surveys



Sources: Federal Reserve St. Louis, Incrementum AG

*“Gold, in its best Heisenberg impression, says, ‘I don’t have a price. I am the price!’”*

**FOFOA**

*“So the dollar is money, money is value, value is trust, trust is a contract, and the contract is debt.”*

**Jim Rickards**

**In light of this environment, Jim Rickards recently made an unorthodox proposal.**<sup>68</sup> Rickards’ idea is that the Fed should abandon its explicit inflation target and instead try to achieve a gold price target of USD 5,000 (within a range of +/- 2%).<sup>69</sup> In short, the Fed should purchase gold as long as the global gold price remains below this target level and sell gold from the inventory<sup>70</sup> it will accumulate in the course of this operation whenever the price of gold trades above this target level. Monetary policy would no longer be conducted by purchasing central bank-eligible bonds, but through central bank purchases and sales of gold. Outstanding central bank credit and deposit money would be increased by boosting the bank’s assets by means of gold purchases and decreased by contracting its balance sheet through sales of gold.

**Achieving the suggested price target of USD 5,000 would be roughly equivalent to a devaluation of the US dollar of at least 75% relative to gold.** According to Rickards, such an open-market policy targeting the gold price would provide a substantial shot in the arm to US consumer price inflation. **The transmission mechanism for achieving higher inflation rates would be provided by rising consumer inflation expectations.** Rickards holds that

<sup>67</sup> A quite plausible thesis that QT could actually lead to rising price inflation exists as well. See “Business Cycles and Inflation”, Acting Man, [Part 1](#) & [Part 2](#)

<sup>68</sup> See “The Golden Solution to America’s Debt Crisis”, Jim Rickards

<sup>69</sup> This proposal has been put forward before, e.g. by Arthur Laffer, Robert Mundell and Jude Wanninski. For a critique of the proposal, which is also known as “Supply-Side Gold Standard”. See [“The Supply-Side Gold Standard: A Critique”](#), Frank Shostak, Mises Daily Article, June 25, 2002

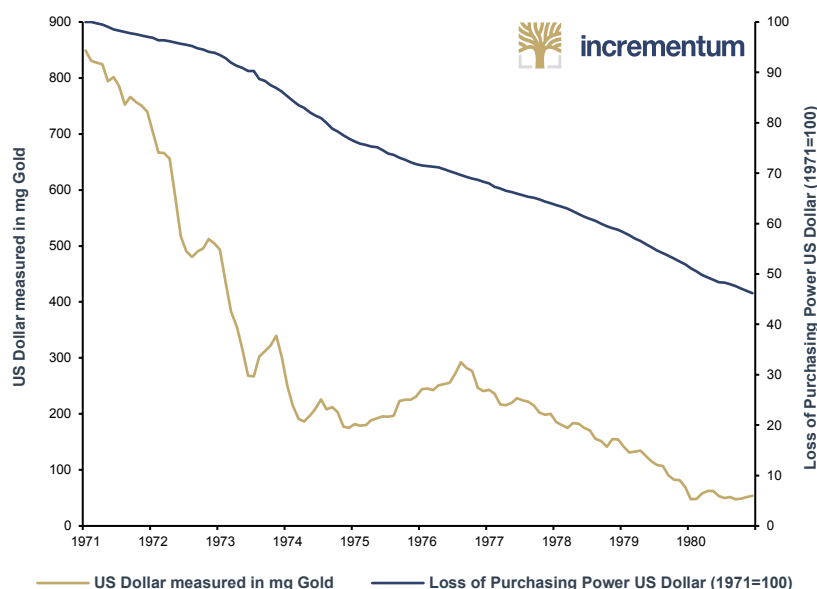
<sup>70</sup> The Fed actually does not really own any gold, which is clearly evident from its consolidated balance sheet. The first line item on the asset side refers to “gold certificates”, but the actual owner of the official US gold reserve is the US Treasury, pursuant to the Gold Reserve Act of 1934. Moreover, the Treasury has the right to pay this obligation to the Fed in the form of US dollars.



moves in the rate of change of CPI are primarily driven by psychological factors. He offers a variation on a famous saying by Milton Friedman in this context, stating that “*Inflation is always and everywhere a behavioral phenomenon.*” Higher inflation expectations prompt behavior by economic actors that leads to rising inflation, in a kind of self-fulfilling prophecy.

As a historical example of such a measure Rickards, cites the devaluation of the US dollar under Franklin D. Roosevelt in January 1934, when the administered exchange value of the US dollar against gold was increased from USD 20.67 per ounce to USD 35.00. This roughly increased the USD price of gold by 70%. As another example he cites the rally in the gold price in the wake of the closing of the gold window by Richard Nixon on August 15, 1971. Over the subsequent nine years the price of gold exploded by 2,200%, from USD 35.00 to USD 800.00, while from 1977 to 1981 the dollar lost 60% of its purchasing power in CPI terms.<sup>71</sup>

#### CPI 1977-1982



Sources: Federal Reserve St. Louis, Incrementum AG

*“It may be too late to save the dollar, but it is not too late to preserve wealth. We live in an ersatz monetary system that has reached its end stage.”*

**Jim Rickards**

Rickards believes that the population would interpret such a significant devaluation of the US dollar against gold as dollar weakness and that this would boost demand for goods and services to such an extent that a significant surge in price inflation would be triggered. Establishing rising consumer inflation expectations is seen as the precondition for increasing the velocity of money or lowering the demand for holding cash balances. Inflation expectations will rise as people realize that the Fed is able to devalue the US dollar against gold – and ultimately against all goods and services – at will.

According to Rickards, the free market in gold would not be restricted by this epochal change in monetary policy. Contrary to the current interventions of the

<sup>71</sup> To be precise, according to 31 U.S.C. §5117, the price is fixed at USD 42-2/9 per troy ounce. See: <http://uscode.house.gov/>

Fed and other central banks in the gold market, the Fed would be intervening in the market officially in order to keep the gold price stable.

### Policy options available after achieving the USD 5,000 price target

*“From its creation in 1913, the most important Fed mandate has been to maintain the purchasing power of the dollar; however, since 1913 the dollar has lost over 95 percent of its value. Put differently, it takes twenty dollars today to buy what one dollar would buy in 1913.”*

**Jim Rickards**

Official US gold reserves have been valued at USD 42.222 per troy ounce on the Fed’s balance sheet since 1973, even though the market price stands far above this antiquated fixed price. Should Jim Rickards’ proposal be adopted, the market value of gold would be 120 times higher than the book value accorded to these reserves by the Fed (or rather, by the Treasury). Such a large discrepancy could motivate the authorities to adjust the valuation guidelines applied to the government’s gold reserves in order to book a large one-time accounting gain. If this accounting trick were implemented, the book value of the approximately 260mn ounces currently held in reserve would soar from around USD 11bn to more than USD 1.3tn.

### This revaluation gain could be used for measures such as:

- 1) Writing down toxic bonds or government debt with the aim of repairing the central bank’s balance sheet or reducing government debt
- 2) Increasing central bank profit distributions to the relevant authorities, which they would use for:
  - a) Potentially inflationary expenditures, e.g. on infrastructure (demand-side economic stimulus)
  - b) A marginal reduction in government debt, which according to classical theory would tend to dampen inflation, as it would reduce the debt service burden even if interest rates were to rise, or at least increase it at a markedly slower pace than would be the case if debt levels were higher
  - c) Cutting taxes, in the hope that tax relief for companies and households would lead to an increase in investment spending and consumer demand, which in turn would boost price inflation (supply-side economic stimulus)
- 3) Retaining the accounting gains on a revaluation account to provision for the risk of future losses, which should have no effect on price inflation
- 4) Providing additional liquidity to commercial banks. As this traditional transmission mechanism is still not working properly, this option would very likely fail to achieve the goal of boosting price inflation.

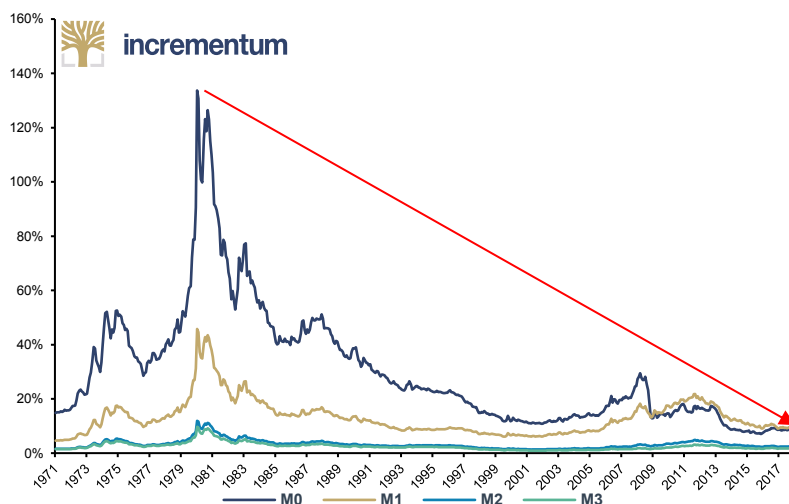
**A fairly recent historical example of the adoption of such a policy was provided by Switzerland.** On May 10, 2000, the SNB no longer recognized its gold reserves at the old fixed rate of CHF 4,596 per kg of gold, but at the then-prevailing market value of CHF 480 per troy ounce (= approx. CHF 15,000 per kg). Most of the one-off valuation gain recognized by the SNB from tripling the value of this balance sheet item from approximately CHF 12bn to around CHF 40bn was paid out as a special distribution to the Cantons, which in many cases used this windfall gain to reduce taxes.

**In this context, it is interesting to consider how much the gold price would increase if the central banks were to use it more intensively in**



**monetary terms. For this purpose we calculate the so-called shadow price of gold.**<sup>72</sup> By this we mean the gold price that would result if the central banks or the banking system were to fully or partially cover the corresponding money supply aggregate with gold.<sup>73</sup>

#### USD coverage ratios in gold for M0-M1-M2-M3: 1971–2018



Sources: Federal Reserve St. Louis, Incrementum AG

#### How realistic is such a proposal?

Extraordinary times demand extraordinary measures. As a rule, such measures are implemented overnight or over weekends. While they are usually heralded in some way, they are nevertheless difficult to time and discern in advance. What, precisely, occasioned Treasury Secretary Steven Mnuchin's visit to Fort Knox in August of last year, and what his seemingly innocent tweet "*Glad gold is safe*" was meant to convey, we may only find out a number of years down the road. Our friend Jim Rickards points out that the visit was in any event "highly unusual", considering that Mnuchin was only the third treasury secretary (and the first since 1948), who deigned to personally inspect the US Treasury's gold reserves.

**Jim Rickards is of the opinion that, no matter what, the eventual solution to the debt problem will involve pushing up price inflation to such an extent that a fundamental "reboot" of the US dollar-based monetary order would result.** Gold would gain substantial ground relative to the US dollar under these circumstances. A renewed ban on private gold ownership or the imposition of a windfall tax on private revaluation profits could definitely not be ruled out in such a scenario.



Steven Mnuchin  
@stevenmnuchin1



Thanks to @usmint staff for hosting at #FortKnox #USBD. First @USTreasury Secretary to visit since John Snyder in 1948. Glad gold is safe!

1:19 PM - 21 Aug 2017

<sup>72</sup> In a paper entitled "The Backstage of Recurring Monetary Booms" our friend Luis Enrique Ponce Goyochea explores from an Austrian perspective the cyclical implications of the evolution of the shadow-to-market gold price ratio. The text of this paper is available online at: <http://hrglobal.com.ar>

<sup>73</sup> For further reference, see the similar table in the chapter "The Shadow Gold Price" in the *In Gold we Trust* report 2017, page 88.



## Conclusion

*“Put not your trust in money, but put your money in trust.”*

Oliver Wendell Holmes

*“Gold is simply permanent units of energy, labour, and time. Gold emanates from the canceling of those 3 but then forever represents them.”*

**Roy Sebag**

*“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? It is hard to imagine that it could be any other standard than gold.”*

**Charles de Gaulle**

**Over the past several years, confidence in the US-dominated monetary and world order has dwindled.** Central bankers across the world appear to have taken the motto of our report to heart and are expressing their steadily growing trust in gold. The surge in official gold reserves since 2008 provides ample evidence for this conclusion.

While official gold reserves of developed countries have, for the most part, remained stagnant since 2007, the central banks of China, Russia, Turkey, and India in particular have boosted their gold holdings significantly. We believe this trend is set to continue in the near term. In line with the increasing shift of global economic output from West to East, gold appears to be moving from West to East as well, at least in terms of relative shares of official gold reserves.

**From the perspective of central banks, gold has not lost its importance as an anchor.** On the contrary, as in previous centuries, gold remains indispensable for inspiring confidence in a currency and serves as a guarantor of its stability. **The gold reserves on the balance sheets of central banks may well become poker chips in future negotiations over a new global monetary order.** Those with a few golden aces in the hole will undoubtedly enjoy an advantage.

**The proportion of gold in the currency reserves held by central banks may be a useful reference for private investors pondering what gold weighting would be suitable for their own portfolios.** This idea is based on the quite interesting fact that the gold reserves held by the central banks of developed nations amount to 19% of their total currency reserves, which approaches the 25% gold allocation recommended for the Permanent Portfolio.<sup>74</sup>

In the following, we have summarized some important key figures regarding the significance of central banks' gold reserves for the most important currency areas.

	Gold reserves/capita	Gold in % of GDP	Gold in % of M0	Gold in % of M2	Gold in % of all reserves
China	55.75 USD	0.64%	5.98%	0.28%	2.25%
Euro Area	1,072.76 USD	3.28%	9.48%	2.65%	42.64%
Japan	251.40 USD	0.65%	3.45%	0.34%	2.41%
Russia	537.40 USD	5.28%	54.91%	10.78%	17.09%
Switzerland	5,185.90 USD	6.58%	7.67%	4.21%	5.25%
UK	197.11 USD	0.50%	11.30%	0.39%	6.88%
USA	1,051.17 USD	1.76%	8.82%	2.45%	8.80%
Total	541.42 USD	2.48%	11.96%	1.83%	13.73%

Sources: IMF, Santiago Capital, Statista, World Gold Council, Incrementum AG

<sup>74</sup> A comprehensive overview of the "Permanent Portfolio" can be found in our book *Austrian School for Investors*, in the section "The Permanent Portfolio".





# How a Tranquilized Business Cycle Helped Create the Nine-Year-Old Bull Market

*“When plunder becomes a way of life for a group of men in a society, over the course of time they create for themselves a legal system that authorizes it and a moral code that glorifies it.”*

Frédéric Bastiat

## Key Takeaways

- For the past nine years, “simple inflation” has dominated genuine credit expansion in the U.S. This has had a tranquilizing effect on the business cycle and bolstered stock markets.
- During the last three years, bank credit expansion has once again become the main driver of monetary expansion, partly awakening the business cycle in the process.
- But with credit growth slowing significantly and QT well on its way, there are reasons to believe a long period of financial stability is approaching an end.

## The Tranquilized Business Cycle <sup>75</sup>

*“Stability is a false ideal. Instability is a vital and necessary part of the capitalist drama.”*

Jim Grant

Except for a few minor aftershocks, the aftermath of the 2008 Great Financial Crisis that plagued the US and European countries have seen a relatively stable period for financial markets. Financial risk indicators have steadily declined in tandem with falling interest rates, while corporate bond and stock prices have risen sharply.

Economic imbalances build up whenever resources are allocated elsewhere than they would be with no monetary interventions. Deflation is part of the cure.

This was all meant to happen, as it is no secret that financial assets are prime beneficiaries of zero-interest-rate policies. As a general rule, **pretty much any asset in general demand that grows at a slower pace than the money supply benefits from monetary inflation**. In the US and elsewhere, banks were able to exchange their illiquid (i.e. worthless) assets at face value for central bank reserves created out of thin air. US banks have been awash with cash ever since, a heist that has clearly contributed to banking sector stability. But banks' leverage ratios remain around the same as before the last banking crisis and still represent an ever-present threat to financial stability.<sup>76</sup>

**“Genuine credit expansion”:**

Banks issue new money to businesses via the loan market.

**“Simple inflation”:** Banks and central banks issue new money through buying government securities.<sup>77</sup>

That asset prices have surged during this highly inflationary and extended period of financial stability is thus no surprise. What is arguably surprising is the length of this period, especially when considering the important fact that the preceding two cycles were never allowed to properly deflate.<sup>78</sup>

Business cycle theory describes the economic consequences when additional money enters the market system via the loan market.<sup>79</sup> Ludwig von Mises referred to this as *genuine credit expansion*. This process sets in motion economic reactions quite different from those caused by “simple inflation”, as the latter does not directly affect interest rates.<sup>80</sup> Simple inflation, according to Mises, takes place when additional money enters the market by way of the treasury borrowing funds (created out of thin air) from banks and using these as payment for various items of government expenditure. But **when new money enters the market via the loan market, interest rates drop and the inflationary effects are then multiplied by the consequences of both malinvestment and overconsumption**. This is why monetary inflation is particularly vicious when created by banks extending credit to businesses and consumers.

<sup>75</sup> This chapter was contributed by our dear friend Atle Willems. Atle is an independent consultant and author of *Money Cycles - The Curse of an Elastic Money Supply*.

<sup>76</sup> The leverage ratio is here calculated as U.S. commercial banks' assets divided by equity. In August 2008 the ratio was 9.4; today it is 9.2

<sup>77</sup> See *Human Action, A Treatise on Economics*, Ludwig von Mises, 2008 scholar's edition, p. 568.

<sup>78</sup> See Authorities intervened during the 2000/2001 crisis and especially during and in the aftermath of the banking crisis in 2008.

<sup>79</sup> See for example “*The Austrian Theory of the Business Cycle – a Short Synthesis*”.

<sup>80</sup> Examples of simple inflation include everybody waking up in the morning to discover that their bank balances have expanded by, say, 10%, and the central bank's monetising government debt.



*“Conditions are different under a credit expansion which first affects the loan market. In this case the inflationary effects are multiplied by the consequences of capital malinvestment and overconsumption.”*

**Ludwig von Mises**

Though an expansion of the money supply is bound to create economic distortions no matter the source,<sup>81</sup> the effects are in general milder the broader the distribution. For example, if we all woke up one morning with say 10% more in our bank accounts, all that would likely happen is a proportionate and simultaneous increase in *all* prices. The economic effects of such a “helicopter drop” of money would be limited and certainly wouldn’t extend past the very short term.<sup>82</sup> The money distribution channel can therefore be said, from a business cycle point of view, to range from banks granting credit for businesses investment purposes on the one hand to something akin to helicopter money on the other.

With this in mind, it would be reasonable to expect a more robust business cycle the larger the share of new money that is created by banks lending to businesses and individuals. Conversely, a declining share could put a damper on the business cycle. It is here we find that the post-Lehman Brothers period in the US differs dramatically from previous cycles.

Since late 2008, new money issuance has for the most part gone through “unconventional” channels. While bank lending is typically the main generator of new money, post-Lehman only about one-third of the new money in the US has been generated by banks issuing loans. The majority of this lending occurred post-2014. The rest has been generated by other sources, mainly by the Fed’s monetizing government debt on a previously unheard-of scale until late 2014 and, to some extent, by banks financing government deficit spending.

*“It is well enough that people of the nation do not understand our banking and monetary system, for if they did, I believe there would be a revolution before tomorrow morning.”*

**Henry Ford**

How the current cycle differs from earlier ones is shown in the chart below. It plots the ratio between loan balances outstanding by US commercial banks and the total quantity of money in the US economy. Since banks create new money when they issue loans, a higher ratio indicates that a larger share of the new money is created by banks extending loans. It is evident from the chart that the three previous business cycle upturns were all associated with increased dominance of bank lending as the source of new money creation. In fact, the peaks in the ratio between bank lending and the money supply all coincided with the onset of GDP recessions. **This ratio therefore captured well not only the peaks of the business cycle during the previous three cycles but also the troughs.**

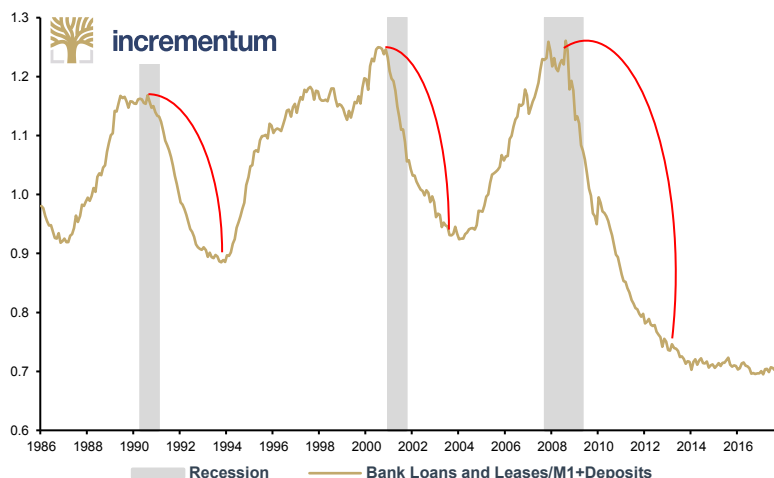
<sup>81</sup> Monetary inflation can promote both overconsumption and malinvestment, both of which create economic distortions.

<sup>82</sup> It would also affect people and sectors of the economy that central banks have no interest in. This, and the fact that it saves no one, are reasons why central banks have yet to add helicopter money to their tool kit.





### Ratio of Loans and Leases in Bank Credit to True Money Supply



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

But after plunging in late 2008, bank lending relative to the money supply continued to drop until it stabilized in 2014 at the lowest level seen over the past 30 years. During the last two years it has even dropped a bit further. Today it remains some 75% and 78% below the 2004 and 1994 troughs, respectively.

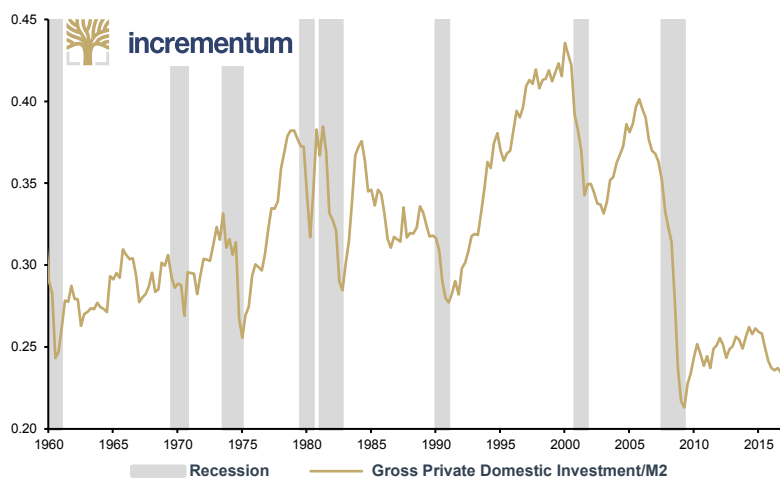
“It’s all relative”: When analyzing economic data, it is helpful to think of the existing money supply as representative of all the goods and services that can be transacted in an economy. That’s why economic aggregates quoted in monetary terms should also be assessed relative to the money supply.

When defined by bank lending relative to the money supply, the present cycle is obviously fundamentally different from previous ones—indeed, there has not been much of a business cycle to speak of. Based on this, we might also expect other economic developments to differ. Thus, **a plausible reason for this long period of financial stability and accompanying bull market in risk assets post-2008 is the temporary retirement of the business cycle caused by the onset of a more general kind of inflation as the new dominant force: simple inflation.** In effect, the business cycle has been smoother this time as simple inflation has dominated genuine credit expansion and may actually have prolonged the cycle’s longevity. Add US banks’ sizeable excess reserve position on top, and we’re left with an excellent recipe for an extended bull market in risk assets, certainly when compared to the two other recent ones.

Investment levels in the US relative to the money supply have also been historically low since the financial crisis, mirroring the low level of bank lending discussed above. Comparing investment levels with the money supply might seem odd at first. But since the quantity of money affects the levels of economic aggregates measured in monetary terms, we get a clearer picture of changes in aggregates by scaling them with the very unit they are measured in: money. We might infer incorrectly if we did not.<sup>83</sup>

<sup>83</sup> An obvious and simple example is the Wilshire 5000 stock market index. If you looked solely at its price level, you would conclude that the market was more expensive in December 2012 than it was in February 2000. This would of course be a huge mistake, as becomes apparent when the index is scaled with the money supply.

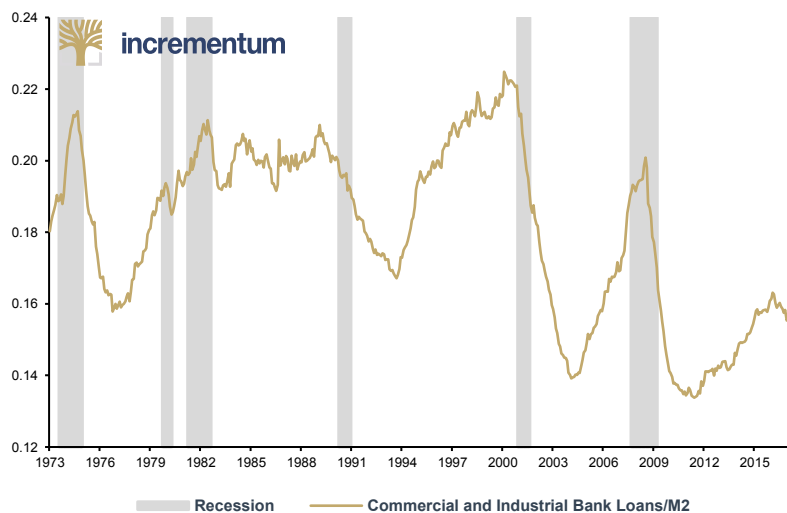
### Ratio of Gross Private Domestic Investment to M2 Money Stock



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

The chart below confirms that things have been different this time with respect to the level of investment, as it indicates there has been no credit-financed investment boom to speak of during the last nine years and counting, certainly not compared with the previous booms. **And with no credit-infused investment boom, it perhaps becomes a bit clearer why the economy and financial markets have remained less volatile for longer.**

### Ratio of Commercial and Industrial Loans to M2 Money Stock



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

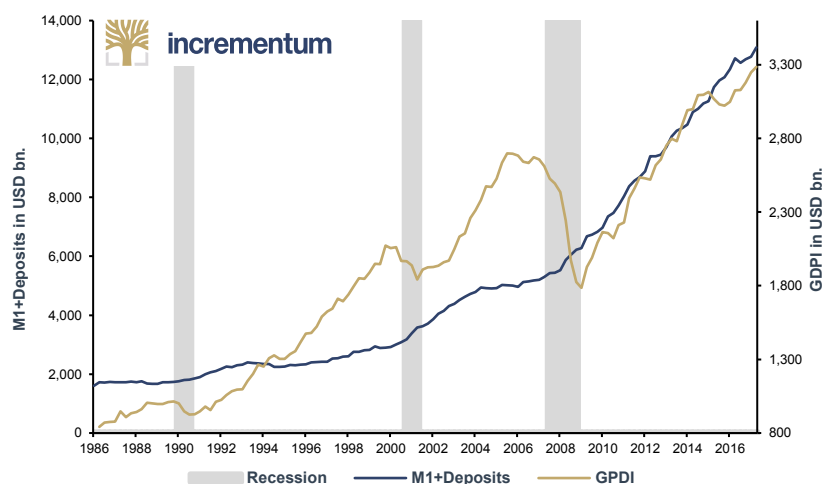
The draining of resources from one part of the economy to finance another made possible by an inflating money supply cannot, however, go on unabated and must eventually come to an end.

**Given the relatively low levels of investment, the post-2008 period as a whole can hence be characterized as more of a money supply-driven consumption binge than a credit-driven investment boom.** Both are of course unsustainable in any event, but a consumption binge can undoubtedly last much longer than an investment boom closely monitored by lenders protecting their downside and scrutinized by shareholders demanding returns – at least for a while.

The relatively low level of bank lending has therefore played a role in limiting investments, keeping them way below levels seen during previous cycles, relative to the money supply.

**But things started changing back in 2014, in tandem with the QE3 Fed taper, as banks once again took the baton as chief money creators.** Since December 2014, bank lending has been responsible for around 72% of the total new money created, a share which is actually above that created during the 22-year period ending August 2008. Gross private domestic investment has also picked up, though the increase continues to lag the previous two cycles when compared with the money supply.<sup>84</sup>

**True Money Supply (left scale) & Gross Private Domestic Investment (right scale)**



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

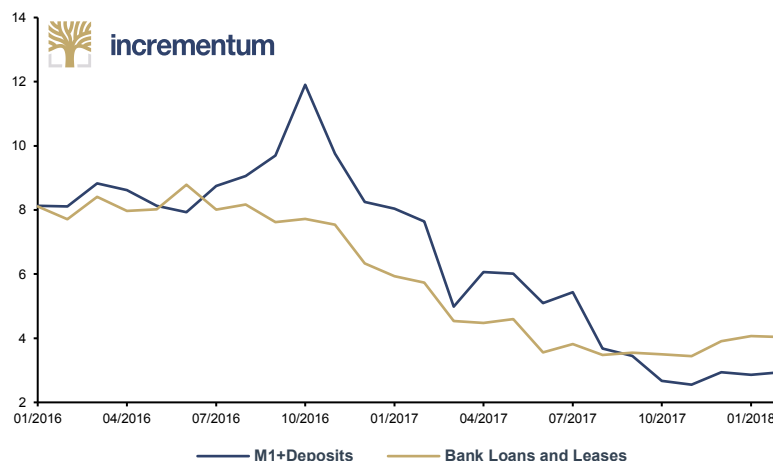
*“Credit is a system whereby a person who can not pay gets another person who can not pay to guarantee that he can pay.”*

**Charles Dickens**

Though we have been far from an investment boom, developments since 2014 have nonetheless started to resemble those of a classic boom-bust-cycle. Does this suggest the US economy is currently at the trough and that the business cycle is about to head upwards? Most likely not. After all, why should we expect lending growth to pick up now, when in fact it has declined during a very bullish period for the stock market? **And why should we expect bank lending growth to suddenly pick up now, when interest rates are rising and the Federal Reserve is shrinking its balance sheet?**

<sup>84</sup> Consequently, gross private domestic investment (GDP) relatively to the true money supply has remained historically low post-2008 and still does today. See also the GDP to M2 money-stock ratio presented earlier (which also shows a longer time period).

### Loans and Leases in Bank Credit and True Money Supply (yoy Change)



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

Inflated stock market prices are dependent on ever-inflating corporate earnings and interest rates kept below their natural level and can hence be sustained only to the extent that the rate of monetary inflation can continue to expand.

Investors in risk assets should therefore be particularly worried that both the money supply- and bank lending growth rates have plummeted for more than a year. Why? Because **the risk of a bust increases when the money supply growth drops**, largely irrespective of how the previous expansion came about. This is especially true for stocks that never could have reached current price levels absent the massive expansion of the money supply since early 2009.<sup>85</sup>

<sup>85</sup> For a detailed account of this subject, see *Money Cycles – The Curse of an Elastic Money Supply*.

**"SIMPLY BRILLIANT"**

- STEVEN S.

**"OUTSTANDING"**

- ZACH H.

**"LEGENDARY"**

- PIETER B.

**"AMAZING"**

- T. SHORT

**"VERY SPECIAL"**

- ANDREW F.

**"ABSOLUTELY GREAT"**

- PIRIIT T.

**"FANTASTIC SERIES"**

- EDWARD C.

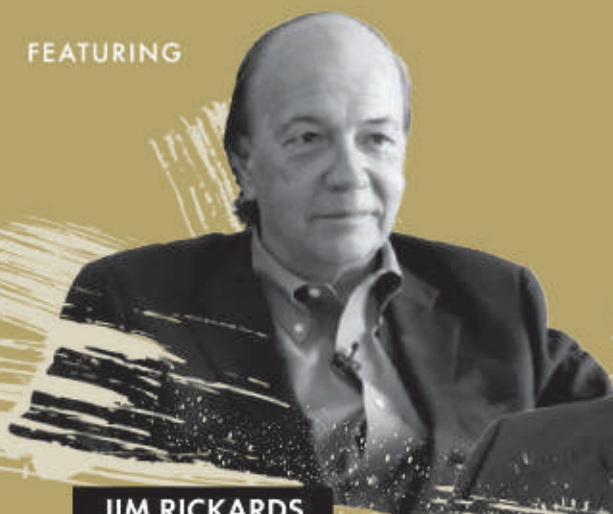
REAL VISION PRESENTS

# GOLD

## THE STORY OF MAN'S 6000-YEAR OBSESSION

A GROUND BREAKING 2-PART DOCUMENTARY THAT HAS INVESTORS RAVING

FEATURING



JIM RICKARDS



RICK RULE



RONALD-PETER STOEFERLE

INCLUDING GRANT WILLIAMS • LUKE GROMEN • BRENT COOK • DANIEL J OLIVER  
DAVID FERGUSON • ROSS BEATY • ROSS NORMAN • AND SIMON MIKHAILOVICH

VISIT

**WWW.REALVISION.COM/IGWT**  
**TO BUY IT NOW FOR ONLY \$9.99**

REAL **V**ISION

## The US Stock Market Euphoria

*“A continual rise of stock prices cannot be explained by improved conditions of production or by increased voluntary savings, but only by an inflationary credit supply.”*

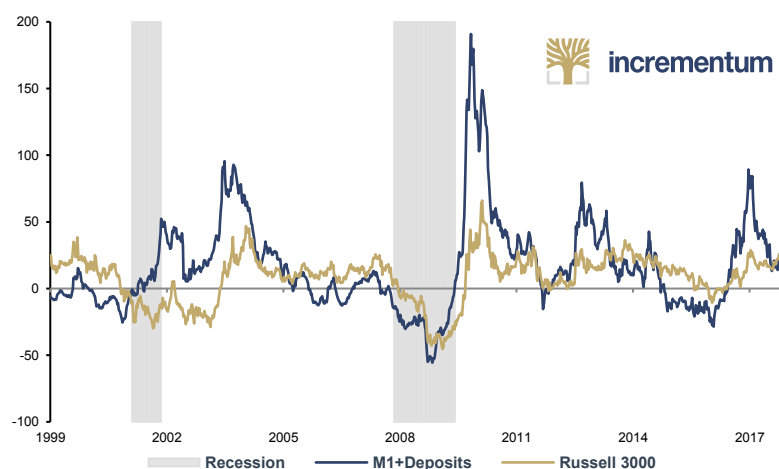
Fritz Machlup

**The US bull market in stocks celebrated its 9<sup>th</sup> birthday this March.** But the longevity of this bull market is not a reflection of a strong post-2008 economic recovery; instead, above all else, it is a mirror image of the ultra-easy monetary policies implemented by the Federal Reserve in the aftermath of the crisis, which have resulted in a near US\$7.5tn (138%) increase in the quantity of money since August 2008.<sup>86</sup> A nearly decade-long period of zero interest rates have forced even relatively conservative investors and asset managers further out the risk spectrum in a desperate chase for yields. Consequently, stock prices had already begun to dislocate from a broad range of fundamentals back in 2014. Since Donald Trump was elected, prices have surged to levels that can best be described as euphoric. Widespread references to this bull market as the most hated one ever illustrate well the asset-allocation challenges faced by risk-averse investors.

An expanding money supply can drive stock market prices up both indirectly and directly – indirectly through its influence on earnings and the discount rate and directly whenever an influx of additional money bids prices up.

As is the case with the business cycle, the booms and busts of the stock market are a monetary phenomenon. Monetary inflation brings about higher prices both directly (more money chasing a relatively smaller amount of stocks) and indirectly (by creating higher earnings and higher valuations). Thus, **the longer the money supply can expand without disruption, the longer the bull market can last, especially when real interest rates remain low. It is in this respect that the stock market has benefited greatly from the business cycle’s being temporarily put out of action.**

### True Money Supply & Russell 3000 (yoy Change)



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

<sup>86</sup> The money supply is here calculated according to the “true money supply” definition developed by Murray Rothbard and Joseph Salerno for the period August 2008 to February 2018.

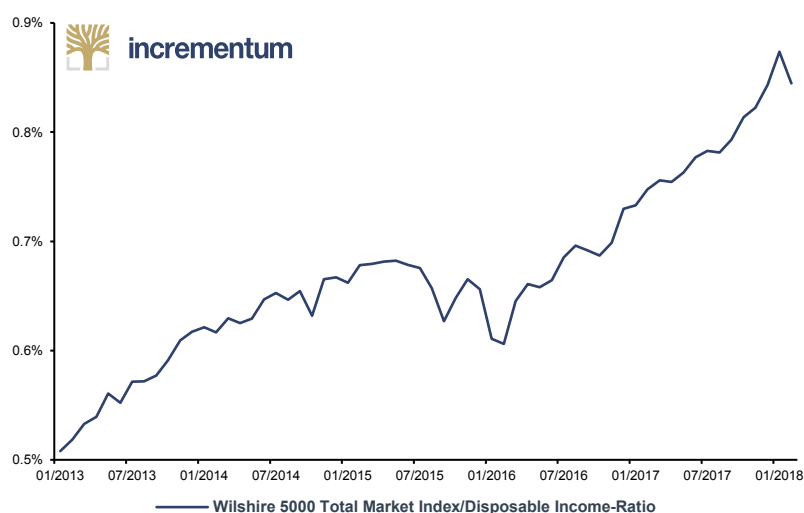


The combo of an increasing rate of monetary expansion and declining interest rates is rocket fuel for the stock market.

The high money-supply growth and low interest rates combo is especially potent when financial markets remain relatively stable, as they indeed have for many years.<sup>87</sup> Stock prices have responded favorably and, as is usually the case, P/E ratios have surged in further recognition of this great climate for stocks. In this sense, there is nothing extraordinary about the CAPE ratio having soared above 32x, as it often does in the latter stages of a bull market.

But **what is extraordinary this time is the extent to which stock prices have so utterly dislocated from a range of economic fundamentals that both corporate sales and earnings depend on over the longer term.** One such fundamental is disposable personal income.

#### Ratio of Wilshire 5000 Total Market Index to Disposable Income



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

Another is personal saving.

<sup>87</sup> U.S. financial risk indicators remain at or near record lows, e.g. the St. Louis Fed Financial Stress Index.



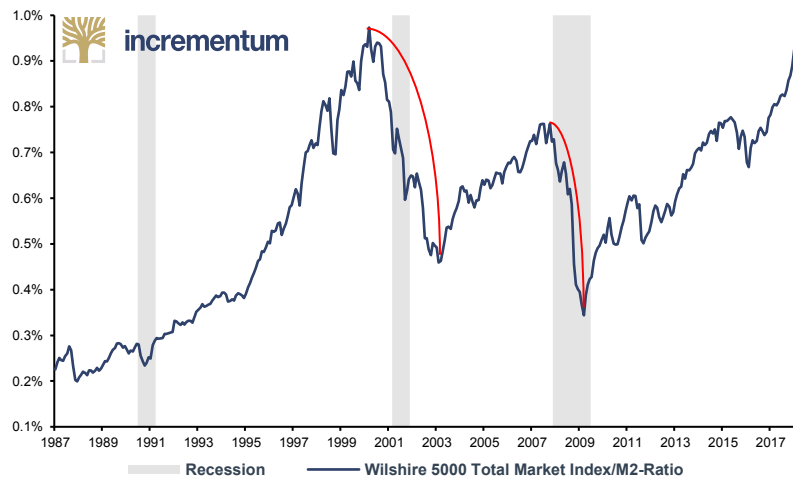
### Ratio of Wilshire 5000 Total Market Index to Personal Saving



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

And a third is the M2 money supply.<sup>88</sup>

### Ratio of Wilshire 5000 Total Market Index to M2 Money Stock



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

*"It ain't what you don't know  
that gets you into trouble. It's  
what you know for sure that just  
ain't so."*

**Mark Twain**

**Theory and history suggest that broad stock market indices cannot remain permanently dislocated from these economic fundamentals.**

Which begs the question: What will trigger a stock market correction this time? Will it be an economic event of some sort, or will a stock market correction trigger an economic event? Or, will a political Black Swan event trigger the bursting of the bubble?

The questions are in many ways redundant, since **monetary expansions and anything benefiting from them can simply go bust under their own weight.** But, if the notion that the business cycle has been temporarily put out of

<sup>88</sup> For more charts on this topic, see "11 Charts Exposing the Madness of the Stock Market Crowd" (also published by Zero Hedge).

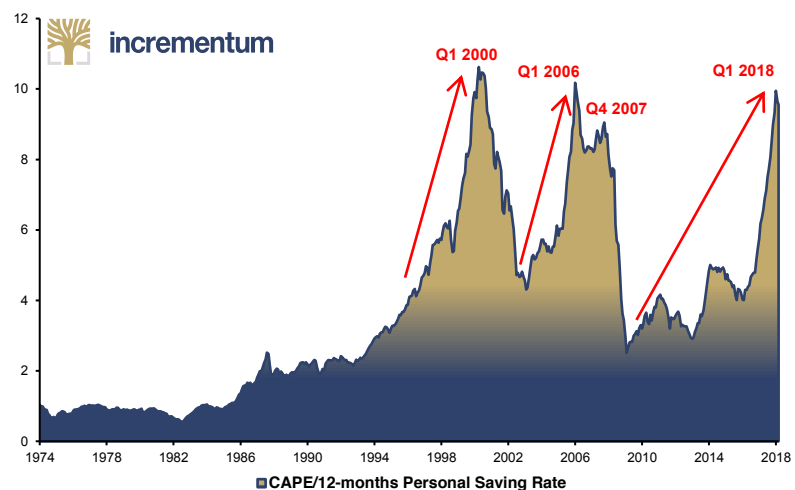
action is true, and given the euphoric levels of current stock market valuations, then probabilities favor a stock market decline as a catalyst for an economic reaction. True, no economic losses to society are incurred by a falling stock market, as it merely represents a decline in the valuation of already existing assets. But, as Chester Phillips and his co-authors once wrote about the 1929 crash,

*“The stock market crash provided the shock to confidence which definitely and dramatically started the depression on its downward course, revealing to most persons for the first time the inherent instability of the conditions which had prevailed for several years.”<sup>89</sup>*

Crashing stock prices affect economic developments, as they so utterly destroy the foundation an elastic money supply is built on: confidence.

It is just such a “shock to confidence” that an economy built on the shaky foundation of an elastic money supply can suffer. In other words, **a drop in confidence can reveal the real economic dislocations the US suffers from** – the lack of saving, to mention one<sup>90</sup> – and set in motion events that lead to an economic unraveling. And with stock prices at current levels and so much at stake for investors and speculators alike, it may not take much of a decline for confidence to be brushed aside.

#### CAPE / Personal Saving Rate



Sources: Federal Reserve St. Louis, Robert Shiller, US Bureau of Economics, Atle Willems, Incrementum AG

<sup>89</sup> *Banking and the Business Cycle: A Study of the Great Depression in the United States*, Phillips, C.A.; McManus, T.F.; Nelson, R.W., 1937

<sup>90</sup> E.g. see *"A Glum Note on the U.S. Savings Disaster"*

## Conclusion

*“With the exception only of the period of the gold standard, practically all governments of history have used their exclusive power to issue money to defraud and plunder the people.”*

Friedrich August von Hayek

**The distortions created by aggressive monetary interventions and the more recent euphoric risk asset valuations have created an economic environment prime for the unleashing of a catalyst.** Which catalyst will ultimately receive the blame is not all that important.<sup>91</sup>

What is important, however, is to recognize that the long period of financial stability orchestrated by the Federal Reserve and other central banks might now finally be coming to an end. The downside risks facing the US stock market today, given current valuations and the drop in both credit and money-supply growth since late 2016, are tremendous, while the upside has become limited. Increased volatility and rising risk premiums are now brewing.

*“In extremis gold is always accepted.”*

Alan Greenspan

**In view of the current situation –created by years of what Bastiat would surely say qualify as “plunder” – you can hardly go wrong by being prepared for a major shift in market behavior, away from the chasing of incremental yields at absurd levels of risk and toward an increased focus on minimizing losses and maintaining purchasing power.**

---

<sup>91</sup> We have discussed several potential catalysts and triggers in the third chapter of this report.



# De-Dollarization – From the Dollar to Gold, Via the Yuan and the Euro

*“The Americans don’t like the euro. What would they have preferred? Nothing at all. No euro. No European currency.”*

Bernard Lietaer

## Key Takeaways

- Driven by China’s efforts, the world has taken large strides toward a new global monetary order.
- Nevertheless, China is still far from establishing the renminbi as a realistic alternative to the US dollar. A meaningful assessment of the situation requires a holistic analysis that includes the euro.
- Particular attention should be paid to the treatment of gold by Europe and China. A new monetary order in which gold will play a central role is emerging – and the US can join the process at any time with its gold reserve of 8,133 tons.

## Introduction: Hold the Horses

*“America is experiencing the dying years of being an empire and acting as the world’s sole superpower. Many of the world’s countries, accounting for one-quarter of global GDP, no longer respect the US or wish to mimic its political structure. The group of countries centered on the BRICS/SCO and others desire a multilateral order.”*

Simon Hunt

*“The PetroYuan represents the intersection of a dying petrodollar and an ascendant renminbi.”*

**ZeroHedge**

In our *In Gold we Trust* report 2017, we devoted an entire section to the subject of “de-dollarization” for the first time. Since then, there has been more rapid progress on the issue than could have been expected at this time last year. The establishment of a crude oil fixing denominated in renminbi can probably be seen as another milestone on the road to the internationalization of China’s “people’s currency”. A gold fixing denominated in renminbi had already been introduced at an earlier juncture.

**At the same time, Beijing has once again signaled that it is no longer interested in continuing to amass US Treasuries.** It’s a simple calculation: The better established and more widely accepted the renminbi (yuan) becomes globally, the fewer US dollar reserves the People’s Republic needs. China’s plan seems obvious: One day the yuan is supposed to replace the US dollar as the senior global reserve currency.

Or is it? Many observers are expressing doubts about this plan, not least due to the fact that no structural shift in current account balances seems to be in sight. The problem? Government-controlled media in Asia and Russia are celebrating every new agreement and every small step as though it were the final nail in the dollar’s coffin. Thus it is easy for Americans to say: “This is simply not true. The yuan’s importance may be growing, but overall it remains negligible.”



*“While the dollar has been the World’s Reserve currency for 40 years, that hasn’t always been the case. The British pound, the Spanish Peseta, and even the Portuguese Escudo at one point in history were all as mighty in their time as the dollar is today. Throughout history, when civilizations needed to finance expansion, they were constrained by their gold reserves.”*

**Grant Williams**

**“Gold: The Story of Man’s 6000 Year Obsession”**

Both perspectives lack a third, rather more neutral evaluation of the situation. The Europeans, of all people, who introduced the only serious competitor to the US dollar in form of the euro, are especially cautious on the subject. Probably this is because they are aware that the process of “de-dollarization” is likely to take decades to play out. It took Europe itself more than 40 years to introduce the euro.

We will begin this section with a discussion of recent developments in China and document the bilateral agreements aimed at avoiding the US dollar. Thereafter we will examine their significance against the background of the euro project. Our interview on the topic with Luke Gromen, an analyst we highly respect, concludes this section.

Considering the euro is important, inter alia, in order to gauge the part gold may be playing. In our opinion it is not a “battle of the US dollar against the yuan” that is at issue. **Rather than a battle, a cautious and gradual reconstruction of an outdated monetary order is underway. It may well be the most important story no one is reporting.**

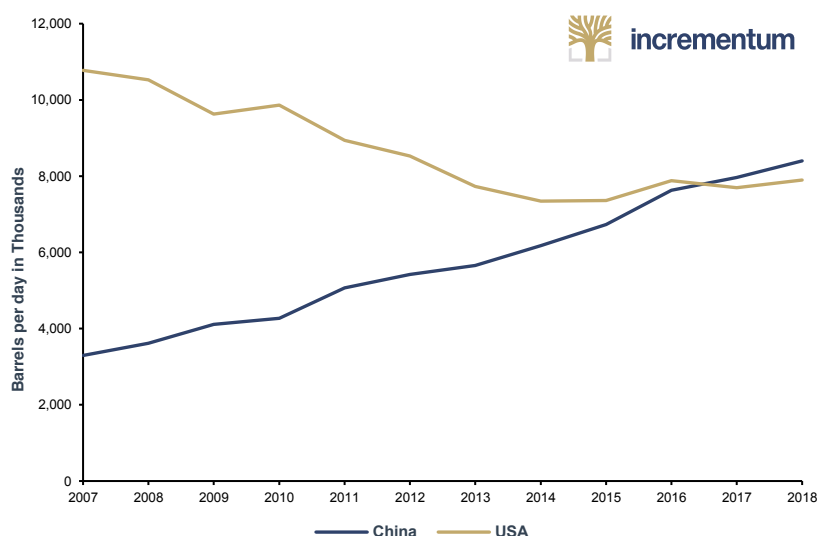
## Ascendancy of the Middle Kingdom: China’s Great Strides

*“Let China sleep, for when she awakes, she will shake the world.”*

Napoleon Bonaparte

China’s rapid rise to the status of an important global economic power has been quite impressive. China imports more oil and gold than any other country does.

### China’s oil imports exceed those of the USA



Sources: CEIC, Incrementum AG

In terms of oil consumption and economic output, only the US still ranks ahead of China. In view of these developments it is not surprising that many observers both



*“The Chinese in this century have been buying gold-- they virtually had nothing 12 years ago, and today, they have bought more than or as much as the annual production of gold every year. Now nobody knows how much the Chinese have, but they probably have 20,000 tons of gold.”*

**Egon von Greverz**

**“Gold: The Story of Man’s 6000 Year Obsession”**

*“This is the single biggest change in capital markets, maybe of all time.”*

**Hayden Briscoe**

within and outside of China expect that Beijing will play a new role in terms of global currency policy as well – and perhaps will be forced to do so.

Since our last *In Gold we Trust* report, China has taken several important steps. The renminbi-denominated oil futures contract that has begun to trade in Shanghai deserves particular attention.

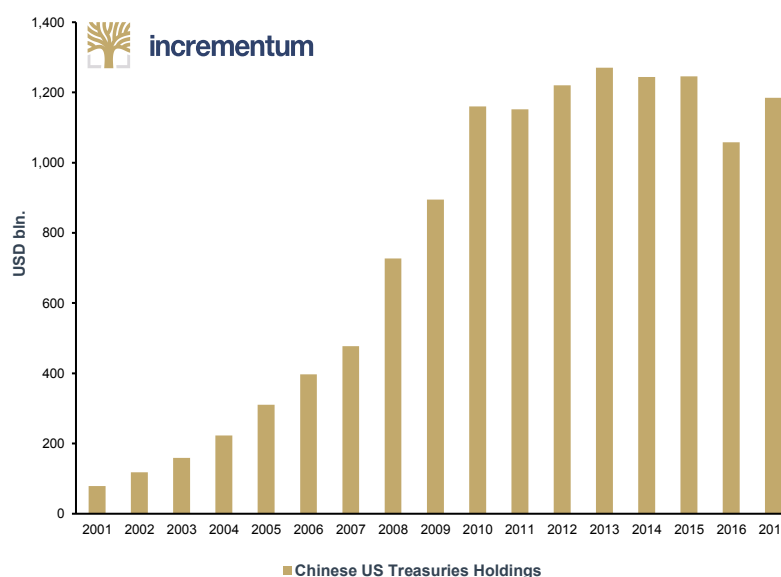
*China’s launch on Monday of its crude futures exchange will improve the clout of the yuan in financial markets and could threaten the international primacy of the dollar, argues a new report by Hayden Briscoe, APAC head of fixed income at UBS Asset Management.*

*Already on Monday, Unipet, the trading arm of Asia’s largest refiner Sinopec, has inked a deal with a Western oil major to buy Middle East crude priced against the newly launched Shanghai crude futures contract.*

*This helps cement the exchange’s viability and challenges the petro-dollar system, in which oil deals are executed in dollars. This would decrease demand for the greenback and boost US Inflation.<sup>92</sup>*

**China has waited for this moment for more than 20 years.** A similar plan failed in 1993. Obviously, quite a bit has changed since then. China has not only ascended to the rank of the second-largest economic power, it also holds a veritable mountain of Treasury bonds and has become the largest creditor of the United States.

#### Chinese holdings of US Treasuries



Sources: Bloomberg, Incrementum AG

A few weeks before the launch of the oil futures contract in Shanghai, Beijing once again dropped hints that it is increasingly uncomfortable with this creditor role. We couldn’t fail to notice that China has begun to leak such reports to Western

<sup>92</sup> “China oil futures launch may threaten primacy of U.S. dollar: UBS”, Reuters, April 26, 2018

news agencies in a deliberate manner – probably in order to achieve the greatest possible impact:

*Officials reviewing China's foreign-exchange holdings have recommended slowing or halting purchases of U.S. Treasuries, according to people familiar with the matter. China holds the world's largest foreign-exchange reserves, at \$3.1 trillion, and regularly assesses its strategy for investing them. It isn't clear whether the recommendations of the officials have been adopted.<sup>93</sup>*

*"We are addicted to our reserve privilege, which is in fact not a privilege but a curse."*

**James Grant**

*"The west must accept its relative decline or engage in a grossly immoral and probably ruinous struggle to prevent it. That is the most important truth of our era. For this reason, above all, westerners need to consider how those in the rising powers view the world."*

**Martin Wolf**

It is also noteworthy that Western media have begun to highlight the importance of such announcements. At the same time, we have to wonder why currencies and government debt continue to be considered separately. Not even when President Trump imposed new punitive tariffs against China was anyone linking the event to the global competition between the US dollar and the renminbi. The question is, why not?

**We will summarize the silence in one sentence: China doesn't want to amass even more US dollars, because Beijing will need ever fewer dollars to pay for its imports of oil and other commodities in the future.** How so? The reason is that it is creating its own markets around the yuan. China intends to become the second player on the world stage that is able to pay in its own currency for imports of oil (and other commodities). It is definitely no coincidence that a few days after the launch of the Shanghai oil futures contract, Reuters published an "exclusive" story on China's plans to intensify negotiations on bilateral oil trading agreements settled in yuan:

*"Being the biggest buyer of oil, it's only natural for China to push for the usage of yuan for payment settlement. This will also improve the yuan liquidity in the global market," said one of the people briefed on the matter by Chinese authorities.*

*China is the world's second-largest oil consumer and in 2017 overtook the United States as the biggest importer of crude oil. Its demand is a key determinant of global oil prices.*

*The plans coincide with this week's launch of the first Chinese crude oil futures in Shanghai, which many expect to become a third global price benchmark alongside Brent and West Texas Intermediate crude.*

*Russia and Angola are two of the top suppliers of crude oil to China, along with Saudi Arabia.<sup>94</sup>*

This Reuters report is remarkable not only because the dominant role of the US dollar is openly discussed but also because it is at least implied that longtime US ally Saudi Arabia is likely to tip the oil market scales. So far Riyadh has not sold any oil in exchange for yuan. The pressure to do so is rising, though, because Russia and other large exporters will be happy to take market share from the

<sup>93</sup> See: "China May Halt Purchases of U.S. Treasuries", Bloomberg, January 10, 2018

<sup>94</sup> See: "China taking first steps to pay for oil in yuan this year – sources", Reuters, March 29, 2018



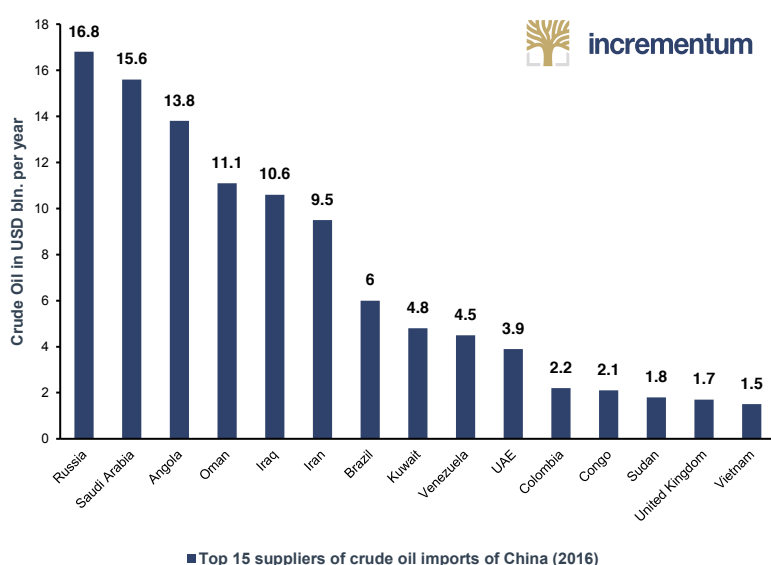
*“Americas aggression around the world is rooted in its aspiration to preserve US hegemony when they have already yielded economic leadership to China.”*

**Sergey Glazyev**

Saudis in the Chinese market. It even seems possible that China will ultimately force Saudi Arabia to accept settlement in yuan.<sup>95</sup>

The article is also noteworthy because oil trading denominated in yuan is not an entirely new thing. These are by no means China’s “first steps” with respect to using the yuan as an oil-trading currency, as Reuters indicates in the headline. The role played by Iran is left out completely. Tehran had officially confirmed in 2016 already that it was selling oil to China for yuan and to other countries for euros.<sup>96</sup> Iran is one of the most important driving forces in the de-dollarization movement, after China and Russia. Tehran is trading, with Turkey and important US ally South Korea, among others, in euros and/or their own currencies.

### Top 15 crude oil suppliers of China



Sources: WTEEx, Incrementum AG

*“The difference between owning a paper contract or claim on gold versus holding the metal itself, while seemingly trivial, is a hugely significant one. The idea of owning a paper claim on physical gold, however, is viewed very differently in the West than it is in East.”*

**Grant Williams**

**“Gold: The Story of Man’s 6000 Year Obsession”**

**In any case, 2018 will enter the history books as the year in which the “petro-yuan” was officially born.** The process of establishing the Chinese currency as a petro-currency (and subsequently as a reserve currency) is not an overnight affair; rather, it is likely to take decades. To simply call it an “attack on the US dollar” actually falls short. In our opinion it is by no means certain that China wishes to stand the global monetary order on its head by taking these steps. It rather looks as though it is securing the advantages associated with boosting use of the yuan and broadening its distribution in a gradual manner.

**Table: Top Oil Net Exporters (2016) and CNY Oil Supply/Pricing Deals**

Nation	Net exports (000's b/d)	CNY Oil Supply/Pricing Deals
Saudi Arabia	7,016	Moving towards pricing oil in CNY
Russia	5,223	Pricing oil in CNY
Iraq	3,750	Building a refinery with Chinese companies, planning 3 more; profit-sharing/marketing-deal

<sup>95</sup> See: “China will compel Saudi Arabia to trade oil in Yuan”, CNBC, October 11, 2017

<sup>96</sup> See “Iran: ‘Der Euro ist unsere wichtigste Handelswährung.’”, Die Presse, September 29, 2016 (“The euro is our most important trade currency.”)

Canada	2,897	Signed agreement to expand CNY trade usage in '14, named ICBC CNY-clearing bank in Canada
Iran	2,150	Pricing oil in CNY
UAE	2,065	Direct CNY/UAE Dirham trading (9/16); Dubai gold exchange launched CNY gold 4/17
Kuwait	2,025	China one of biggest drillers in Kuwait market with 45% market share of rigs
Angola	1,650	Made CNY 2nd currency in 2015
Nigeria	1,598	Nigeria, China Sign \$2.4 Billion Currency-Swap to Lift Trade
USA	1,534	
Mexico	1,494	
Kazakhstan	1,424	Partially Chinese-owned, massive Kashagan oil field began shipping quarter 4/2016
Norway	1,272	
Brazil	1,124	
UK	698	
<b>Total</b>	<b>35,920</b>	

Sources: Luke Gromen, FFTT, EIA, Incrementum AG



## The Quandary: How Much Freedom to Permit?

*“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 smartest warrior is the one who never has to fight.”*

Sun Tzu

**The internationalization of the yuan can be viewed as a mirror image of the de-dollarization of the world.** But even if it appears at first glance as though China is destined to win and America is destined to lose, the situation is not that simple. China has maneuvered itself into a difficult starting position, beginning with the graphical design of the renminbi banknote. Every single note is graced with the portrait of the “Great Chairman” Mao, who was not exactly renowned for his economic literacy. Many foreigners, with the possible exception of Europeans, would probably refuse to accept a banknote adorned with the likeness of Mao.

Naturally, much has been learned in Beijing since Mao’s day. Wikipedia has long devoted a separate page to the “Internationalization of the renminbi”.<sup>97</sup> The German news magazine *Der Spiegel* had already reported in 2011 on the timetable that is now being implemented:

*China’s long-term goal is to become a country with an anchor currency. If that happens, other countries will have to maintain reserves of the yuan instead of the current reserve currencies, the dollar and the euro. China could then use its own currency to conduct transactions, gaining more favorable terms as a result, in its global shopping spree, such as in the commodities markets. Years ago, Hu and the Politburo attended secret lectures in which Chinese professors explained the history of the rise and fall of major powers. During these sessions, the Chinese leaders realized that no modern country has ever become a superpower without a reserve currency.<sup>98</sup>*

*“I believe that yuan pricing of oil is coming and as soon as the Saudis move to accept it — as the Chinese will compel them to do — then the rest of the oil market will move along with them.”*

Carl Weinberg

The challenges remain the same to this day, and China’s leadership has grown quite familiar with them. How much freedom in the market are they willing to permit their currency in order to promote its international acceptance? Control over the exchange rate is not the only concern, though it is of course an important one. If the international role of the yuan continues to grow, China has to expect that the currency will appreciate in the long term. Beijing’s control over the currency’s exchange rate has long been criticized in the West, particularly by Washington.

It is well-known that the Chinese government exerts a great degree of influence over its economy. Beijing steers the Chinese economy not only by setting official growth targets but also by maintaining direct government control over the country’s largest banks. This control allows the politburo to direct the allocation of

<sup>97</sup> See “Internationalization of the renminbi”, Wikipedia

<sup>98</sup> See “Exchange Rates and Reserve Currencies China Plans Path to Economic Hegemony”, *Der Spiegel*, January 26, 2011



investment into areas it prefers. The Brookings Institution, a think tank that, incidentally, has hired the last two Fed chairpersons, analyzed the situation extensively in 2013 and concluded that China's task is far more complex than we might expect at first glance:

*Ultimately, the degree and depth of a currency's internationalization depends on the openness, sophistication and depth of the host country's financial markets. If these markets are very deep, very open and very flexible, international investors will willingly participate in them on a large scale, and hold the necessary currency balances to do so.*

*Yet the creation of such financial markets is extraordinarily difficult, and carries with it many risks. At the simplest level, banks could be disintermediated and lose their predominant position in funding investment. This would mean the erosion of the government's ability to influence the allocation of capital to projects it deems developmentally important.<sup>99</sup>*

*"The available evidence suggests that some policy makers are very interested in the potential of the offshore renminbi market to aid in the process of dismantling capital controls and reforming the domestic financial system... Positioning of the renminbi as a major global reserve currency does not appear to be on the list of important goals."*

Arthur Kroeber

This explanation makes clear why the process is a "marathon". After many years of efforts, the yuan is still far from fulfilling the conditions required of a global reserve currency, not to mention the leading one. Even if the importance of the US dollar rests to a considerable extent on its role as a petro-currency, that is far from the only reason for its dominance. In other words, just because a "petro-yuan" is coming into view, it is still a long way from being number one in the world.

The yuan is still far from being the "new global reserve currency", as some people assert. As a medium for international payment transactions, the renminbi ranks in sixth place, according to SWIFT data. With a share of just 1.7%, it not only ranks well behind the US dollar (42%) and the euro (31%) but also behind the British pound, the Japanese yen, and the Canadian dollar.<sup>100</sup>

**In reality it would currently not be possible for China to settle all its oil purchases in yuan.** Trading in the yuan simply lacks the necessary liquidity. Global foreign exchange markets, which are home to daily trading volumes of up to USD 5tn, paint an even more drastic picture: 90% of all currency pairs traded include the US dollar. The yuan takes part in just 4% of all transactions, according to the latest figures released by the Bank for International Settlements (BIS).<sup>101</sup>

With respect to foreign exchange reserves China's situation doesn't look any better. Almost 63% of all currency reserves are held in US dollars, 20% in euros, nearly 5% in yen, 4.5% in British pounds, and 2% in Canadian dollars. Even Australian dollar reserves, with a share of 1.7%, rank ahead of the renminbi, which represents just 1.2%. Of course, this share seems likely to increase due to the growing importance of the renminbi as a petro-currency. **Nevertheless, other countries are likely to hesitate before committing to holding an overly large proportion of their reserves in a currency that is not freely convertible.**

<sup>99</sup> "China's Global Currency: Lever for Financial Reform", Arthur Kroeber, Brookings-Tsinghua Center for Public Policy, Monograph Series Number 3, February 2013

<sup>100</sup> See "RMB Tracker", Swift

<sup>101</sup> See "Turnover of OTC foreign exchange instruments, by currency", Bank of International Settlements





## The Comeback: Return of the Euro?

*“In our experience, no opinion clears out a room quicker than questioning the pedigree of the U.S. dollar. We find Western investors remarkably closed-minded about the dollar’s reserve-currency status.”*

Trey Reik, Sprott Asset Management

*“The Americans don’t like the euro. What would they have preferred? Nothing at all. No euro. No European currency. Have you ever met someone who had a monopoly and was willing to relinquish it voluntarily? I haven’t.”*

**Bernard Lietaer**

**Approaching the baggage claim area in a number of smaller European airports, we are often greeted by large billboard ads that announce “The World Currency”.** The ads are from a Chinese bank, and the currency they refer to is of, course, the renminbi. The statement made in this ad is so far little more than an unproved assertion. Chinese diplomats in the know may smile when they see such ads in Europe: China still has a lot to learn from Europe with respect to currency policy. After all, the Europeans had already tangled with the Americans long before the first skyscraper was built in Shanghai. Belgian economist Bernard Lietaer, who developed the European currency unit ECU while he was in the employ of Belgium’s central bank, gave an interview in which he described this episode in currency history as follows:

*“It all started in 1978, with a meeting between French president Valerie Giscard d’Estaing and German chancellor Helmut Schmidt in Bremen. France and Germany went through a phase of great love for each other at the time. And I had just begun to work for the Belgian central bank.*

*D’Estaing then went to the Banque de France and said: “We have to create something specifically European.” Meanwhile, Schmidt said to the Bundesbank: “Make something that doesn’t displease the Americans.” Of course these two approaches were incompatible.*

*The euro put an end to the dollar’s monopoly position, as it is no longer the world’s sole reserve currency. When I met then Fed chairman Paul Volcker, he didn’t even introduce himself; instead he just asked: “What the hell are you doing with this ECU thing? Is the dollar no longer good enough?”<sup>102</sup>*

A comprehensive discussion of the history of the euro is beyond the scope of this report. As the above-cited figures illustrate, though, the euro has established itself as the second-most important global reserve currency within less than two decades. And it has done so without introducing a euro-denominated gold or oil fixing. **Of course, Europe is struggling with problems of its own.**

Capital markets in the eurozone are significantly better developed than those in China, and Europe’s political and legal stability is of a different quality as well. Nevertheless, the unique construction of the euro as a common currency of 19 sovereign nations creates different challenges, as the Greek crisis has

<sup>102</sup> “Die Amerikaner mögen den Euro nicht”, Die Presse, May 21, 2017 (“The Americans don’t like the euro”)

demonstrated. However, to paraphrase Mark Twain, the rumors of the euro's demise have been greatly exaggerated.

Fears over a potential breakup of the eurozone have declined substantially. As is the case with many other things, there is actually an index that measures the fear level of market participants with respect to the potential demise of the euro. At the end of January 2018 it declined to a new low. Only 6.9% of respondents still expected the eurozone to break up over the coming 12 months. The index has existed since 2012 and is based on a survey by German research house Sentix; around 1,000 investors take part in the survey. In July 2012 the index reached a high of 73%. That was the same month in which ECB chief Mario Draghi issued his famous pronouncement that the ECB would do "whatever it takes" to rescue the euro.<sup>103</sup>

**Much has been done to strengthen the eurozone in the wake of the crisis.** The creation of a banking union under the central supervision of the ECB was a decisive step. The next step may be even more significant for the global heft of the euro: A capital market union is to be put into place in the EU. According to a study by Austrian economic research institute IHS, a strong "home bias" still prevails in EU capital markets.<sup>104</sup>

*"If the Trump administration not only abandoned the strong dollar policy but were intent on pushing the dollar down aggressively to secure trade advantages, that would diminish the currency's luster as a reserve asset."*

**Barry Eichengreen**

This bias is supposed to change gradually as the capital market union is implemented, a process that mainly involves harmonizing rules and regulations. Because Europe is organized in a more decentralized manner than China is, using capital markets for corporate financing, as is customary in the US, does not represent a political stumbling block but an explicit goal. In other words, Europe would like to reduce the economy's dependence on the banking sector. These measures could create deeper and more flexible financial markets, which in turn would likely strengthen the euro's attraction as a reserve currency.

**Notably, it was the euro rather than the renminbi that benefited in terms of increased internationalization of the currency in the wake of China's recent attacks on the dollar.** US news agencies published exclusive reports on the euro's growing advantage. Bloomberg reported that the euro's share of global foreign exchange reserves is expected to increase from 20% to 25% in coming years:

*With U.S. protectionism on the rise, a number of Wall Street strategists say the case for the euro has rarely been better. Existential crises that hobbled the European experiment have receded. A resurgent economy has spurred talk the region's central bank will curb policies that drove euro yields below zero. And as President Donald Trump threatens a trade war with China, the European Union is pursuing free-trade deals all across Asia and Latin America.*

*After shunning the common currency for years because of negative interest rates and the region's persistent turmoil, reserve managers at some of the biggest central banks are now looking to add more euros, according to two heads of foreign-exchange strategy who've held regular discussions with*

<sup>103</sup> "Euro Breakup Fears Slide to Record Low", Bloomberg, January 31, 2018

<sup>104</sup> "Das Geld fließt dorthin, wo die Jungen leben", Die Presse, March 14, 2018 ("Money flows to where young people live")



*them. Developing countries and oil-exporting nations in the Middle East, which rely heavily on international trade, are the most likely to lift their euro allocations.*

*The ramifications of such a shift are significant. For over a half century, the dollar has been the reserve currency of choice for most of the world's central banks because of its depth and stability in global markets. That status has given the U.S. some notable advantages. It has helped America keep a lid on funding costs, allowing it to run budget deficits, as trading partners park their dollars in U.S. government bonds.<sup>105</sup>*

Like Reuters in its report on China, Bloomberg discussed quite openly the mechanics of the petro-dollar system and its importance for the US economy. As the article stresses, not only the government but also corporations have been able to take advantage of favorable funding conditions under the reign of “King Dollar” – and the policies of the Trump administration may be harming the dollar:

*Contrast Trump's rhetoric with Europe's recent moves to forge closer trade ties with Japan, China and much of Latin America, including Mexico and Brazil. The EU's total trade with China has jumped almost 75 percent in the past decade to \$590 billion in 2016, IMF figures compiled by Bloomberg show. **On that basis, the EU is on the cusp of eclipsing the U.S. as China's biggest trade partner.**<sup>106</sup>*

There is a reason why so many people from China arrive at European airports.

## Bridging the gap: China, Europe, and Gold

*“The fate of reserve currencies is to decline over time.”*

Dr. Martin Murenbeeld

In Europe we sometimes get the impression that the German (or French) secret service has managed to pull off the coup of the century: infiltrating the Oval Office with one of its own agents. While the US public is worrying about Russia and Putin, Europeans are benefiting – particularly with respect to their relationship with China. As *Der Spiegel* reports:

*Chancellor Angela Merkel spoke to Chinese President Xi Jinping before she made her first visit to the Trump White House. Economy Minister Zypries likewise travelled to China before heading to the U.S. And Vice Chancellor Sigmar Gabriel, who is also Germany's foreign minister, said in reference to Trump's protectionist tendencies: “When one window closes, another opens.”*

*China, too, has been conspicuously seeking to improve relations with Germany. For weeks, Germans in Beijing have been noting a Chinese charm*

<sup>105</sup> “As Trade War Heats Up, Biggest Currency Whales Make Their Move”, Bloomberg, March 26, 2018

<sup>106</sup> “As Trade War Heats Up, Biggest Currency Whales Make Their Move”, Bloomberg, March 26, 2018



*offensive, with diplomats and business leaders alike being asked by high-ranking Chinese functionaries what they can do to help.*

*“The election of Donald Trump has improved the dynamics in Chinese-European relations,” says Cui Hongjian, director of the European department of the China Institute of International Studies. “Europe and China share a confident view of globalization and international cooperation.”<sup>107</sup>*

China’s giant “One Belt, One Road” project, also known as the “New Silk Road”, has by now made even the local papers in Europe. Municipal authorities are debating how they might maximize the benefits from the project. In short, China and Europe are drawing closer together – in trade, diplomacy, and the minds of their populations.

Naturally, a great many stumbling blocks remain. Germany is not particularly interested in seeing “Made in China” actually become serious competition in global markets. The propensity of the Chinese to copy Western technology while buying up European companies on a grand scale is causing alarm in Europe. In connection with the “New Silk Road”, local newspapers write about “oppressive contracts” allegedly proposed by Chinese negotiators in order to ensure that everything is done in accordance with China’s wishes.

*“In China, the gold trade is conducted in Shanghai, in Russia it is in Moscow. Our idea is to create a link between the two cities in order to increase trade between the two markets.”*

**Sergey Shvetsov,  
Bank Rossii**

The EU has already proved that China’s monumental economic project can work only if China accepts Europe as an equal partner and both sides have ownership in the “Silk Road”. From the European perspective this means that social and environmental factors have to be considered, as well as transparency. Chinese negotiators were reportedly “surprised” that the EU is of one mind with respect to these matters. Apparently they had hoped that it would be fairly easy to get a foot in the door in economically weaker Eastern European countries.

Such stumbling blocks are unlikely to prevent the economic convergence of the Eurasian continent, though. China has also long engaged in intense cooperation with Russia, not only in the energy business but also in gold trading – also with the aim of sidestepping the dollar.<sup>108</sup>

This brings us back to the subject of currencies. In recent months European central banks have openly signaled that the renminbi is now regarded as a reserve currency and have cautiously taken the first steps to build up positions in the currency. The German Bundesbank, the Banque de France, and the ECB have shifted small amounts of US dollars into yuan in response to the growing importance of trade between China and Europe.

China for its part has always supported the euro. That was already the case in 2002 when the common European currency was still in its infancy. And it remained the case a decade later, when a crisis threatened to break up the euro:

*Chinese Premier Wen Jiabao says his country will continue to support both the euro and European government bonds.*

<sup>107</sup> “International Trumpquake: Tentative Stirrings of a Beijing-Berlin Axis”, Der Spiegel, April 20, 2017

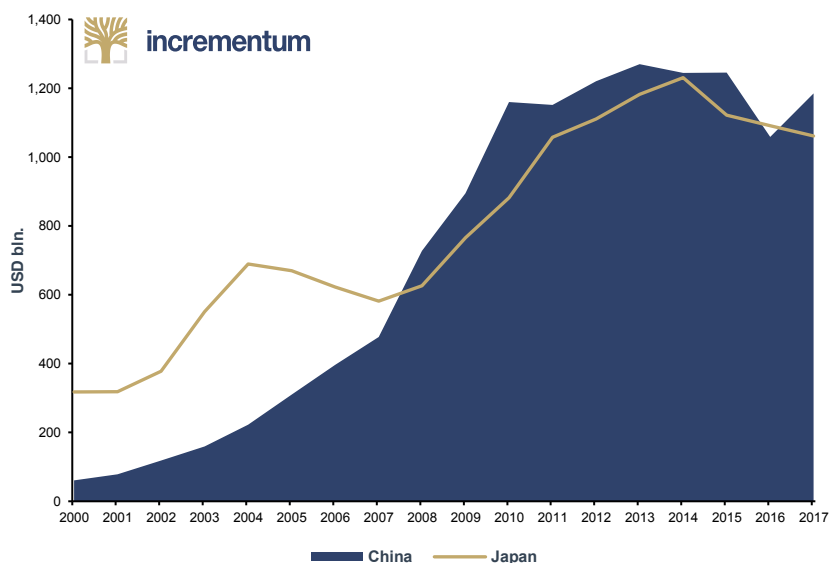
<sup>108</sup> “Moscow and Beijing Join Forces to Bypass US Dollar in Global Markets, Shift to Gold Trade”, Zero Hedge, April 2, 2017



*“I have made clear that China supports a stable euro,” he said. He also promised not to cut China’s investment in European bonds, despite the recent crisis which has weakened the value of many such bonds.”<sup>109</sup>*

These announcements of support were of course made at a time when China also actively supported the US dollar through purchases of Treasuries. In fact, China has taken over a role previously played by Europe, that of major US creditor.

### Holdings of US-Treasuries



Sources: Bloomberg, Incrementum AG

Now that China has made clear that it no longer wants to amass additional Treasuries, the US administration has turned to the private sector to obtain funding. Analyst and newsletter author Luke Gromen (Forest for the Trees), whom we highly respect, has done extensive research on these developments. Gold is another important factor he examines in his analyses.

*“Gold reserve has been a key part of countries’ diversified international reserves and many central banks have gold as part of their international reserves. So does China. As a special asset with properties of financial assets and commodities, gold, together with other assets, is conducive to adjusting and optimizing the overall risk and return characteristics of the portfolios of international reserves.”*

**SAFE – State Administration of Foreign Exchange**

Gromen is among a small number of analysts who have studied the special treatment of gold reserves by the ECB. We have conducted a wide-ranging interview with him on this and other topics, which concludes this section.

We agree with Luke that gold plays an important role in the reorganization of the monetary system (which is what the process of “de-dollarization” represents), albeit not in the sense of a classical gold standard as existed in the 19<sup>th</sup> or early 20<sup>th</sup> century. Europe has adopted a new approach. Not only is the total European gold reserve of more than 10,000 tons the largest in the world, but the ECB marks it to market on its balance sheet four times a year.

China has modeled its own approach after this example as well. It is known that Beijing continues to build up its gold reserves. Why this is being done becomes clear only once we grasp the significance of gold in the euro system. Frank Knopers of marketupdate.nl, whom we also hold in high esteem, has summarized the situation as follows:

<sup>109</sup> “China backs the euro at dollar’s expense”, The Telegraph, June 7, 2002

*The ECB was the first central bank to value its gold reserves at market value, instead of a fixed value or weight denomination. Several countries have adopted this gold policy of marking gold reserves to market value. In 2006, Russia adopted a new strategy of buying gold and putting it on the balance sheet at the market value. This year China apparently adopted a similar policy regarding gold. By valuing gold reserves at market value, these central banks join the gradual shift from the current (dollar-based) international monetary system to a new (gold-based) monetary system.*

*Europe, Russia and China have aligned their gold policy. Each of these countries recognizes gold as an important element of global reserves, valuing the metal at the free market price.”<sup>110</sup>*

## Conclusion

*“The successful remonetisation of gold by a major power such as Russia would draw attention to the fault-lines between fiat currencies issued by governments unable or unwilling to do the same and those that can follow in due course. It would be a schism in the world’s dollar-based monetary order.”*

Alasdair MacLeod

*“We are ready to work together with our partners to overcome the excessive domination of the limited number of reserve currencies.”*

**Vladimir Putin**

As discussed above, the process of “de-dollarization” is not a one-dimensional affair that concerns only China, even if the steps taken by Beijing attract most of the attention in view of the current trade dispute. Rather, it is a long-term process that has been underway for at least 40 years, that is, at least since the unilateral – and supposedly “temporary” – suspension of the Bretton-Woods regime by the US in August of 1971.

To shed light on the steps being taken by China nowadays, we must consider them against the backdrop of the introduction of the euro and its significance for international currency markets. **“De-dollarization” is not about waging a currency war; it is about the cautious reorganization of an outdated monetary architecture toward a new system that is balanced from the perspective of all major powers – and that can serve as the foundation of a multipolar global economic order.**

<sup>110</sup> “Analysis: China marks gold reserve at market value”, Marketupdate.nl, October 24, 2015





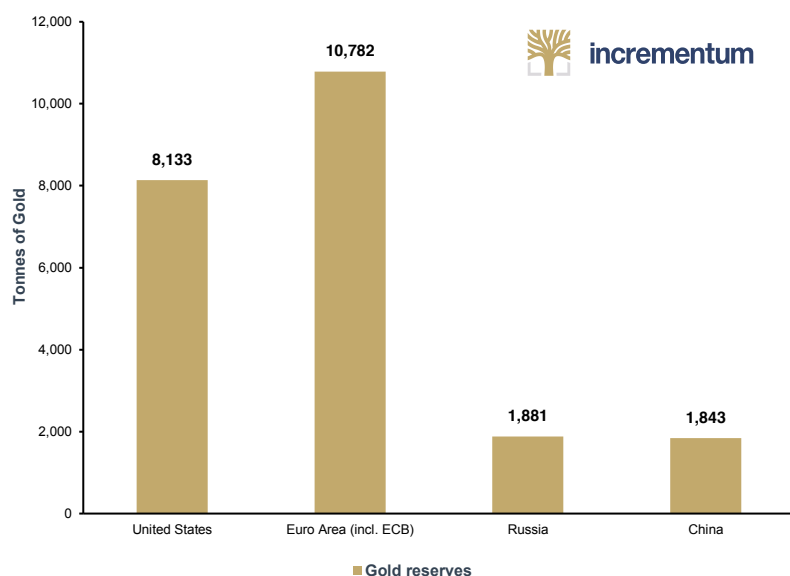
*“If it’s not money, what does the US have 8-thousand tons? Why does the IMF have 3,000 tons? Why has Russia tripled its gold reserves in the last 10 years? Why is China buying every piece of gold that’s not nailed down at the largest mining production in the world, and zero exports.”*

**Jim Rickards**

**“Gold: The Story of Man’s 6000 Year Obsession”**

This effort includes the United States, whose representatives are very likely aware of the long-term advantages of the model envisaged by Europe and China, despite its short-term drawbacks. After all, when the gold exchange standard was abolished in 1971, the US left a back door open for itself: 8,000 tons of shiny gold, which can be used as seed capital for a new system.

#### Gold reserves: USA, Euro Area, Russia, China



Sources: World Gold Council, Incrementum AG

**A number of important foundations for this future were laid in China, Europe, and the US in the past year.** We have documented the most important ones in this section to give readers an overview of these highly complex processes, which affect all our lives on a number of levels – whether we like it or not. Our interview with Luke Gromen, featured below, serves as a complement to this overview.



**Silver Bullion**

# Truly Secure Your Wealth™

**UNTOUCHABLE BY  
BAD GOVERNMENTS  
AND COLLAPSING  
FINANCIAL SYSTEMS**

Insured • Tested • Segregated • Private Property



**Silver, gold, nickel & cobalt stored in Singapore**

20 Jalan Afifi, Certis Cisco Centre II, #03-02A, Singapore 409179

+65 6100 3040 | [sales@silverbullion.com.sg](mailto:sales@silverbullion.com.sg) | [www.silverbullion.com.sg](http://www.silverbullion.com.sg)

## Exclusive interview with Luke Gromen: “The dollar appears to be in Zugzwang!”<sup>111</sup>



**Luke Gromen is the founder of FFTT, LLC (“Forest for the Trees”), a macro/thematic research firm catering to institutions and sophisticated individual investors.**

Luke’s vision for FFTT was to create a firm that would address the opportunity he saw created by applying what customers and former colleagues consistently described as his “unique ability to put the big picture pieces together” during a time when they saw an increasing “silo-ing” of perspectives occurring on Wall Street and in corporate America.

***Luke, in your work you are painting a pretty unique picture of a currency world in transition. Do people notice these changes?***

In the last few months I’ve been at conferences in Vail, Puerto Rico, Barbados, New York, Boston, Los Angeles, San Diego – and **it seems as if monetary professionals are beginning to talk about the US fiscal problems and have started to recognize that the yuan-oil contract launch has gone better than expected thus far.** In my experience, what China is doing with this contract and its impact on the US fiscal situation is being followed much more closely by senior-level US investment professionals than you might gather by monitoring Twitter or listening to CNBC.

***Are people alarmed? Do they have an uneasy feeling? What do you see?***

The thing that seems to have people most uneasy right now is LIBOR’s rise, particularly relative to European banks. The way the LIBOR-OIS spread is rising is signaling a problem somewhere.

***What is your explanation for the rise in LIBOR?***

I think it’s twofold: As with a lot of things on Wall Street, there is a very good mechanical explanation. US tax reform is effectively forcing offshore US dollars back to the US; and as that happens offshore, dollar markets are being squeezed, which makes LIBOR rise as supplies dwindle. That makes sense. Also, the Fed is raising interest rates.

However, that doesn’t account for the broader context of what has been happening since the third quarter of 2014, when global central banks stopped funding the US government on net. Global FX reserves peaked and started to decline in Q3 2014, and LIBOR bottomed and began rising. This entire time, Wall Street has been focused on the mechanical reasons for LIBOR’s rise. First it was capital regulations that forced banks to buy more Treasuries, crowding out the private sector. Then we had money market fund reform, which forced the US money market funds to buy more Treasuries and again shift funds away from the global private sector. All of these things are true on a mechanical level, but there has been little or no contextual recognition by Wall Street that all of these regulations are being put in

<sup>111</sup> This interview was conducted on March 28, 2018.

place because the US has been forced to fund US deficits more in the global private market after the public sector effectively cut off US deficit funding on net back in Q3 2014.

***So what is the big picture here? What is happening and where are we going?***

In 2008 the dollar-based system effectively blew up. Almost immediately, in 2009, China began angling for a new reserve asset, a neutral reserve asset, SDR-based. And they weren't the only ones. The outcry for a new system, the complaint that the dollar was the main problem, had been coming from China, Russia, G20, IMF, World Bank....

It's like everybody knows about the problem, but nobody really talks about it. It's not like the dollar was always a problem, right? The system did work at some point. If you go back to Bretton Woods, there were two options discussed. There was the American option, where the dollar is the center of the financial system and is linked to gold while everything else is linked to dollars. And then there was Keynes' option, which was something called the Bancor: basically, a neutral settlement asset that would float in price relative to each currency. This system would have been much more sustainable, because imbalances would not have been allowed to build up over time. That was probably the better option from a purely economic standpoint, but America had the biggest military and most of the gold and most of the oil and most of the factories, so we basically threw our weight around and got the political outcome we wanted.

***Does the SDR resemble the Bancor system that Keynes proposed?***

It could if constructed properly.

***Do you think the Americans might go back to a Bancor-style SDR now, or is that a ship that has sailed?***

**Well I was recently introduced to a German chess term by a friend of mine, Simon Mikhailovich: Zugzwang. It means that you have to move, but every move you can possibly make is worse than your current position. And the dollar really is in Zugzwang.** Any solution that reduces the dominance of the dollar is ultimately really good for America as a whole. But it's likely going to be bad for those people in Washington who really like to have a credit card that has no limit.

***Is de-dollarization a correct term for what is happening?***

Yes. But I think it requires context. The people who say it isn't happening typically use either the latest IMF percentage of global FX reserves or the percentages of the SWIFT system and say, "Look, it's 70% dollars and only a tiny percentage of yuan, so you're wrong." I understand what they're saying. But in my opinion the better question is to look at the commodity consumption of China and ask, how much longer is China going to be a really big percentage of commodity consumption but only one percent of FX reserves? *De-dollarization* is of course a loaded word. Ultimately it's about China and other countries moving away from the dollar in



regard to commodities in order to gain independence from the USD with regard to their current account and balance of payments.

***How much of this is a power struggle and how much is self-protection?***

I think they are very closely intertwined. The way the dollar system works is in essence that the US runs deficits and offshores jobs and production to other places, and then they sell us goods, and we give them dollars. And then they lend us the dollars back. And this worked – particularly from the 1980s forward, after Paul Volcker raised rates. He really managed the dollar for everybody else. **However, once the US economy needed a sustained period of negative real rates just to keep itself from collapsing in the aftermath of the GFC, the system became a dead man walking.**

The US's creditors cannot afford to lend at negative real rates for an extended period of time, or else they will simply bleed the real wealth of their nations over to the US. It became a necessity to change the system, in their view. That opinion was reinforced in 2012 when the US weaponized the dollar and kicked Iran out of the SWIFT system. We said: If you disagree with us we are going to use the world's reserve currency against you, which is the complete opposite of what Paul Volcker did. He raised rates into a recession and in so doing crushed the domestic US economy but stamped out inflation, so the rest of the world would trust the US to manage the dollar as an international currency.

***Isn't it short-sighted to use the dollar as a weapon? You force anybody that gets cut off from SWIFT to develop alternatives.***

Yes, in my opinion it was an incredibly bad idea, but it speaks to this concept of Zugzwang. When you keep making short-term choices based on lesser evils, sooner or later you end up in a situation like this.

***Do you think the Iraq war and other interventions were measures to keep the dollar in its position as the main global currency?***

I don't know the answer to that. However, I do think it has long been important to the US to maintain the dollar's monopoly on the pricing of oil, for capital-flow reasons.

***What does that mean exactly?***

It's all about capital flows, and more specifically, about maintaining capital flows to the US government. In other words, if oil is priced in every different currency, or the five big currencies, and many countries can print currency for oil, the world's need to hold dollars drops drastically. And all of a sudden US deficits start to matter again because global central banks will no longer need to grow US Treasury holdings and may begin to sell them. The global private sector would then have to fund US deficits, and the government would over time begin to crowd out private-sector borrowers and drive interest rates higher.

If on the other hand oil is priced in multiple currencies, you basically move back to a neutral reserve asset system, a balance of payments-based system. Historically





that was a non-starter for the US because we were wildly short on oil and a big importer, and so under a balance of payments system the US fiscal situation would rapidly become unsustainable. Given what has happened with regards to shale oil in the last 15 years, domestic oil security is really not as much of an issue anymore.

**If the dollar falls against oil, it's a positive for the US economy now. It's a stimulus.** We have seen that.

***Europe set up the euro in the '90s and stayed out of Iraq in the '00s. But since then they have supported the US in almost anything. Did they change their minds?***

Yes, they have supported the US a great deal in recent years. However, the question that comes to my mind is, if Europe was always so happy with the dollar, why did they bother with the euro in the first place, and why did they put 15 percent of Eurozone reserves into gold and mark that gold to market quarterly?

**That construction of the euro is a very anti-dollar expression.** In my view, if Europe's ruling class was happy with the dollar, they would have put all their reserves into Treasuries, funded the US deficit, earned dollars by running a significant trade surplus with the US, and called it a day.

***So what you're saying is that the Europeans could have set up the euro in a way that would have kept the old system going. Why didn't Europe do that?***

I think some of the leaders who founded the euro were looking at the structural picture of US deficits and US entitlements and realized that by around 2020 the US was going to be in a very difficult fiscal position. We would owe so much money in entitlements. That was very predictable. They were looking at the dollar system and realized that the Americans would someday either have to default on the entitlements or default on managing the dollar for the rest of the world. In plain English, what I'm saying is this: If oil is priced only in dollars and if the US prints USD 100tn to pay for entitlements, then the price of oil is going to go through the roof. German factories' oil import bills would likely rise, too, making German factories less competitive.

***But today the Chinese have an oil-price and a gold-price fixing. Europe doesn't. Why not?***

I think we'll never know. Regardless, China is a different animal.

***You talked about the ECB's marking its gold to market. What is so special about that?***

To my eyes it really makes the euro a really attractive currency to an oil-exporting nation. Fiat currencies are what they are. Governments always print too much in the end. That has always been the case. Europe tries to solve this problem by having some gold and marking those reserves to market quarterly. If I am an oil or commodity exporter and I have euro balances, I know that if the Europeans print too many euros, the price of gold in euros should rise; and as it does, Eurozone gold reserves will appreciate in euro terms. That should provide stability to the euro, **because the euro becomes more gold-backed when the price rises.**





In my eyes that makes the euro “unsinkable”, if you will. In extremis the ECB could print euros and bid for gold in the open market at X price. And the euro would theoretically strengthen as Europe’s percentage of gold reserves increased.

**So the way gold is treated by the Eurozone is essentially a communication to the world by the euro architects: “It’s our currency and it’s our problem”, while the US famously said, “The dollar is our currency but your problem.”** But at the same time those euro balances buy less gold. Correct, but those euro balances should maintain their purchasing power of other real goods and commodities by virtue of the Eurozone’s gold reserves.

***Back to China. They are now openly stating that they are not going to fund the US anymore. Is that right?***

I think it’s fair. The central bank announced at the end of 2013 that it is no longer in China’s interest to stockpile FX reserves. That was a huge moment. They were saying for the world to hear: We’re not going to fund growing US deficits anymore. **And most market participants don’t appreciate what the combination of the yuan oil and gold contracts do. They create a defense mechanism against the dollar weapon.**

***How?***

Historically, the way emerging markets have run into trouble is this: They borrow dollars in the beginning of the cycle. Then the US starts to raise rates and the dollar starts to rise, and the EM gets upside down in their currency; they have to burn down their FX reserves. The only lever EMs have ever had to defend themselves against the dollar has been FX reserves. It’s a gold standard, in a way. But that’s a finite pile. When they run out of FX reserves, they have to devalue their currency; their economy collapses; capital flows out; and Westerners come in and buy up assets on the cheap. Then we redo the cycle. We saw this in Latin America in the 1980s; we saw it in Southeast Asia in the 1990s. We saw it in Russia and then in Argentina in the early 2000s. We see this over and over.

**And China has seen it over and over. What they have done with the oil and gold contracts is to give themselves a second lever.** They can do two things now. They can burn FX reserves – and we saw them doing that in 2014 and 2015 – but the alternative is to adjust the rate at which they are willing to settle gold for oil with key partners. In other words, if China were to start moving toward a current account deficit, it would probably be because their commodity bill is rising, because commodities are really their biggest import. They can now go to Russia and say, instead of settling CNY oil imports at 20 barrels an ounce, let’s do it at 40 or 50. And in theory the price of oil would effectively drop for China. Their current account would be rebalanced. It’s also a good deal for Russia because they would redenominate their gold reserves in barrels of oil. On the one hand, their oil would buy them less gold in China. That’s a bad thing for Russia. But China would have revalued the gold that the Russians already have higher in terms of oil, which would make Russia’s FX position more sustainable.

***So that's one of the reasons why the Russians are stacking so much gold?***

Possibly.

***Isn't that weird? Wherever you go, people will tell you gold is useless. But all the state actors who are able to are stockpiling this stuff. Western media, especially American media, are very anti-gold. Why?***

**The reality is this: Americans won't buy anything that doesn't rise in price. We're momentum chasers.** And we think that if the price isn't moving, there is nothing going on. Gold prices haven't really moved for five years in dollars. Physical gold is flying east. A number of creditor nations like Germany, Netherlands, and Austria have been repatriating their gold; but as long as the price doesn't move, we in the US think everything is okay. But that's our political culture, and it's probably human nature, too: Nothing is wrong until it is.

***But why hasn't the price of gold moved?***

Expansion of the paper market. The gold market is very opaque, but you get little glimpses of what is really going on from time to time. In late 2012, there were about 20 paper ounces outstanding on COMEX for every one physical ounce in registered inventories; by early 2016, there were 550 paper ounces outstanding on COMEX for every physical ounce in registered COMEX inventory.

In 2017 so much gold was leaving the UK that it had an effect on trade statistics. Well, the UK doesn't have any mines. That was all gold leaving UK vaults and going to China, by and large. **Why is all that gold leaving? How did that not affect the price? The only answer? It was papered over.** And I've heard that from people who have been trading gold for a long time. I was recently told by one veteran trader that 20 years ago on COMEX 10 to 15% of the volume was at least related to physical gold. Now that number is probably 1–2%, while average daily volume has risen meaningfully.

***But if papering over the gold market works, why not just keep doing that? How does the system break?***

The system can break if you get a second player. As long as it's only dollars, the system is working. But as soon as the PBoC decides that they want to make a market at a different gold/oil ratio than in New York because that is what China's domestic economy needs, that's a problem. The manifestation of the petrodollar system in global markets is a low gold-to-oil-ratio. Gold prices are low, so gold doesn't compete with the Treasury market; oil prices are high to create the dollar surpluses needed to buy the Treasuries to fund the US government. Low gold, high oil.

**As the system weakens, you should start to see the gold-to-oil ratio rise, because you have another market now.** That market is only a couple of days old now, but China can make it so that the US can no longer have both low gold and high oil by implementing a second gold/oil ratio in CNY terms. If you have low gold, you have low oil – which means the US domestic energy sector is going to get hit. Or, if you want expensive oil, you're going to get expensive gold – which means



the dollar must weaken. So as the gold-to-oil ratio rises, it tells you something about the health of the petrodollar system.

So it's very interesting to me, using that lens, that when the Shanghai gold international board contract started in Q3 2014, it took 13 barrels of oil to buy an ounce of gold. And that number almost immediately went to 30. Then it pulled back to 25. In early 2016 it went to 45 barrels to buy one ounce of gold. Since then it has pulled back to 22, but it never went below 20 barrels per ounce, which is a number that served as a ceiling for a long time before.

***What you are saying is that the price of gold has been rising in terms of oil, and you expect this to continue?***

Over time, yes.

***So what options are on the table for the US?***

At the same time that the euro launched, the US began to significantly expand the interest rate and debt derivatives market. It is our belief that this was a move to support the dollar system when European purchases of Treasuries began tapering off at that point. Another step the US took was getting China into the WTO after the creation of the euro. After China entered the WTO in late 2001, their pile of Treasuries went from USD 60bn to USD 1.3tn in less than 10 years. That was our fix when the Europeans effectively stopped funding the US deficit. Now the Chinese are moving away. That's a problem. We're 20 years later. **Our demographics are much worse; our debt position is much worse. The real US economy is not well-prepared to handle rising interest rates.**

***What do you think is going to happen next?***

I think one of four things is going to happen: One, we force the world to go back to the old system. China, OPEC, Europe – everyone buys growing amounts of UST's at negative real rates to finance our deficit. In my opinion, that's not gonna happen. Option number two is that we slash our spending. Ninety to ninety-five percent of the US federal budget is spent on just three things: entitlements, defense, and interest expense. We are spending 550bn dollars a year just on interest expense. While cutting these three is theoretically possible, in my opinion the window to cut any of them is politically closed. **Option three is to significantly devalue the dollar. And option four is for the Fed to rain down helicopter money and finance the whole thing, which is just another version of option number three.**

***What you are talking about should lead to massive hyperinflation. But you actually think it won't be so bad in the US, right?***

Yes, if we were talking about Argentina or Zimbabwe or even Germany, we might very well be looking at hyperinflation. America is different in the sense that at the right price we can produce all our own stuff. That is not to say it wouldn't be disruptive, but shale oil is a perfect example. Oil went from 10 dollars to 100 dollars, and within three years we had a booming energy sector and were one of the world's top oil producers. So, what we would be talking about is a structurally

weaker USD that drives a structural rebalancing of global balance of payments flows. Lower deficits in the US, lower surpluses in China/Asia.

***So what is new about the new system?***

**In my opinion, there will be no singular reserve currency like the dollar anymore. The yuan is not going to surpass the dollar as a reserve currency.** In my opinion, China doesn't want that. We will likely see some sort of neutral asset, a much more balance-of-payments-driven system, not a national currency in the center of the system.

For thousands of years currencies traded on what I call balance-of-payments fundamentals: The nation with the best balance of trade and biggest pile of reserves had the best currency. After 1971 the nation with the best currency suddenly had the worst balance of trade and the lowest pile of reserves. Today everybody thinks that is normal, but it isn't; it's highly abnormal. So, I think we are just going back to the old way of doing things. And if you look at the world on a balance-of-payments basis, the dollar looks horrible, simply by virtue of the fact that the US had to run deficits to supply the world with dollars under the petrodollar system.

***In this new world, where the Europeans can use the euro and the Chinese can use the yuan, do you even need a reserve currency like the dollar is today?***

In my opinion, no, you don't; and that is the direction things are heading – to a multipolar trade system. **And after a phase of rearranging things, we will see a new golden era of trade.** People will have to ask themselves, how do we compete against the Americans if the dollar is at 70 instead of 90? What does that world look like? That's a very different world than the one we're in today.

***Thank you very, very much, Luke! It was a great pleasure!***

The pleasure was all mine!



# Inflation vs. Deflation – The Big Showdown?

*“American politicians are in a love-hate relationship with inflation. They hate inflation, but they love everything it causes.”*

John D. Rockefeller Jr.

## Key Takeaways

- The expansion of the money supply first manifests itself in the financial markets, especially due to the QE programs. Consumer price inflation tends to follow with a time lag.
- Despite the potential for a strong increase in consumer prices, deflationary forces are still around.
- Our *Incrementum Inflation Signal* has indicated rising inflationary tendencies since September 2017.



## Efficiency-driven price deflation vs. politically induced monetary inflation: a brutal slugfest

*“Someday we will look back on this period and shake our heads at how gold was literally being given away while at the same time folks were falling all over themselves to lend governments money at a discount to the actual rate of inflation, and the central banks were telling us they were determined to precipitate even more inflation. If this scenario were written in a novel, no one would believe it, but that is where we are.”*

Bill Fleckenstein

*“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

**One crucial driver of the gold price is inflation.** Therefore, we want to discuss this topic again in more detail this year. As always, we feel obliged to define terminology before getting to the heart of the matter. Our regular readers know already that we try to untangle any linguistic confusion between the following terms in connection with inflation: *inflation* originally means “monetary inflation”, i.e. the expansion of the money supply, while price inflation (i.e., continuously rising prices) is its consequence.<sup>112</sup>

**In order to understand the phenomenon of rising prices better, we need to back up a bit.** A crucial element of a society that is based on the division of labor with indirect barter is that the value of goods and services is measured in units of the medium of exchange. Whenever the most important features of a market-based society were in place throughout history, productivity rose on the back of efficiency gains. That is, by means of the division of labor, innovation, and capital accumulation, less input created more output.

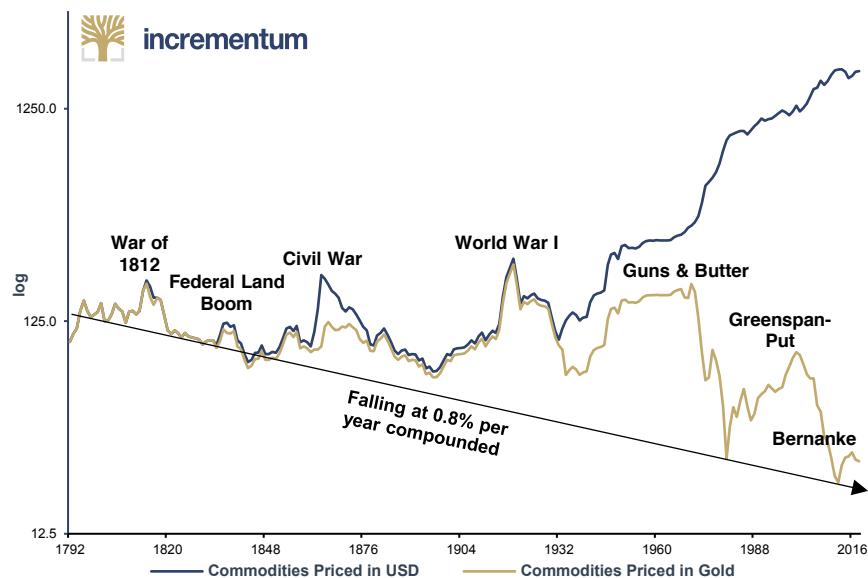
**In a monetary system with a (relatively) constant money supply, these efficiency gains are reflected in generally falling prices. We can call this phenomenon price deflation. Only an inflationary fiat money system comes with the characteristic of generally rising prices.** This can be clearly shown on the basis of long-term commodity prices measured in gold and in USD. The transfer from deflationary to inflationary monetary systems manifests itself in the price development of commodities.

<sup>112</sup> See [“The misunderstood inflation”](#), In Gold we Trust report 2016, p. 43 ff





### Long-term commodities prices measured in USD and gold



Sources: Dan Oliver, Myrmikan Research, Incrementum AG

*“No subject is so much discussed today - or so little understood - as inflation.”*

**Henry Hazlitt**

Realizing that the persistent rise in prices is not the natural state but the inescapable consequence of the current monetary system, requires a quantum leap of understanding. By the way, it is exactly this realization that lets the owners of gold gladly miss out on interest income on their “investment”. They know that the yellow metal has at least maintained its purchase power over long periods of time without interest income. Gold is a liquid asset, outside the world of continuously inflated fiat money. It is this continuous inflation that leads nominal prices (including the gold price) to rise in the long run.

## From monetary inflation to price inflation: a long and complex process

*“It would be illogical to assume that all conditions remain stable.”*

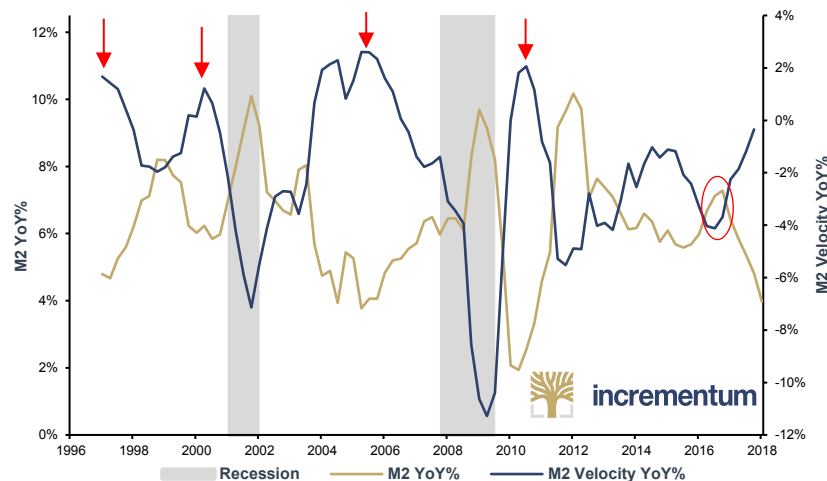
Spock, commanding officer, starship Enterprise

At the outset, we have to further define the term *inflation*. It is important to understand whether *price inflation* is supposed to mean consumer price inflation or asset price inflation. In general use – but also the way the central bankers refer to it – *inflation* tends to mean consumer price inflation, which is usually captured by a consumer price index (CPI). However, monetary inflation does not only affect consumer prices but also asset prices. Since asset prices are, if at all, only rudimentarily and indirectly captured by the CPI, they tend to be underrepresented in public debate. What does not help is that rising share prices tend to be seen as positive.

**However, the decisive factor in the manifestation of elevated consumer price inflation is psychological.** The velocity of circulation of the currency

depends on the behavior of individuals. If people have the inclination to increase the amount of money they hold, this behavior can temporarily deprive the economic cycle of more money than the central bank or the commercial banks can recirculate through the two-step process of money creation. As the following chart shows, money-supply growth and velocity of circulation are negatively correlated

M2 growth rate vs. M2 velocity of circulation, y/y in %



Sources: Federal Reserve St. Louis, Incrementum AG

*“Continued inflation inevitably leads to catastrophe.”*

**Ludwig von Mises**

If an excessive money supply circulates, monetary inflation creates the perfect condition for consumer price inflation. Against the purely mechanistic notion that monetary inflation has to automatically result in consumer price inflation, we have to contend that it is only the behavior of individuals that triggers excessively rising prices.

In approaching inflationary tendencies from the perspective of the Austrian School of Economics, we find that Murray Rothbard’s book *The Mystery of Banking* holds a number of interesting thoughts on the various phases of inflation. Rothbard regards the bitter fight against deflation that manifests in the printing of money as the root cause of most historical phases of hyperinflation. The dynamic changes in the demand to hold money are a crucial factor that is often underestimated by the economic mainstream.

#### Rothbard identified three “ideal type” phases of the inflation process:

1. **In the first phase, the money supply is stepped up drastically, but prices hardly rise.** Given that people assume that the expansion is of a temporary nature, they still prefer to save money instead of spending it. This phase is the land of plenty for politicians, because deficits can (presumably) be financed and campaign goodies can be handed out without repercussions, and yet no price inflation is being created.
2. **In the second phase, the public starts to slowly realize that the continuous increase in prices has become a normal state of affairs.** People begin to anticipate the ongoing loss of purchase power and to price in their inflation expectations. As Rothbard explains: “The



*deflationary expectations of the public are replaced by inflationary ones... Instead of hoarding money, the public will spend their money more quickly so as to pre-empt price increases. In the second phase of inflation...) falling demand for money (i.e. a decrease in the holding of money) will intensify inflation.”<sup>113</sup>*

At that moment, politicians are faced with a crossroads: whether to admit natural deflation, painfully reduce excesses, and accept a recession or remain on the path of cheap money and thus risk moving on to phase 3.

3. **This phase is usually referred to as the “crack-up boom”.** The public has realized that the inflation momentum cannot be stopped and instead is picking up speed. People abandon the existing monetary system and choose alternative currencies. Rothbard described this phase thus: “In Germany [in 1923, ed.] this was referred to as ‘the flight to material assets’. The demand for (i.e. holding of) money drops to almost zero, and the prices explode towards infinity.”<sup>114</sup>

*“We have to remind ourselves again and again that nothing has made the German people as bitter, hateful, and ready for Hitler as inflation.”*

**Stefan Zweig,  
The World of Yesterday**

It is difficult if not impossible to translate this ideal type sequence of events into today’s complex reality. But if one were inclined to do so, **the years after the financial crisis would probably be closest to phase 1.** We may have even seen the transition to phase 2 in the past two years. According to Rothbard, it is impossible to predict the exact turning point. He claims that there is no scientific, i.e. praxeologically defensible way of predicting the moment when all the subjective inflation expectations of the public turn from deflation to inflation. Many cultural factors inform people’s inflation expectations, among them trust in government and the speed of communication.

## Monetary tectonics and asset price inflation

*“The unpleasant finale of the big global debt narrative and thus of global inflation may come from a side that today we may intuitively sense but do not really know yet, i.e., from massive, geopolitical events such as wars or revolutions.”*

Ferdinand Lips

**The inflation process follows an extremely complex pattern, as described above, and is not predictable.** What makes the question of whether deflation or (hyper-) inflation is upon us even more complicated is the fact that the system is inflated via the credit market. At the moment, the equation “money supply growth = credit supply growth” obtains. In a highly leveraged banking system such as ours and in a highly indebted state, the risk of a deflationary shock is always around the corner. When commercial or central bank balance sheets shrink because their assets (loans or government debt) default and have to be written off unexpectedly, this has a deflationary effect (all things being

<sup>113</sup> “The Mystery of Banking”, Murray N. Rothbard, 2008 [1983], p. 70

<sup>114</sup> “The Mystery of Banking”, Murray N. Rothbard, 2008 [1983], p. 72



equal). The psychological element of uncertainty within the population, which is part of such an event, exacerbates the deflationary forces. The proclivity to hold money increases significantly, and the velocity of money declines accordingly. Due to the potential instability, we have often referred to the interdependencies of inflationary and deflationary forces as “monetary tectonics”.<sup>115</sup>

**Last year the test of strength between a market-cleansing bout of deflation and the inflation induced by politics continued vigorously.**

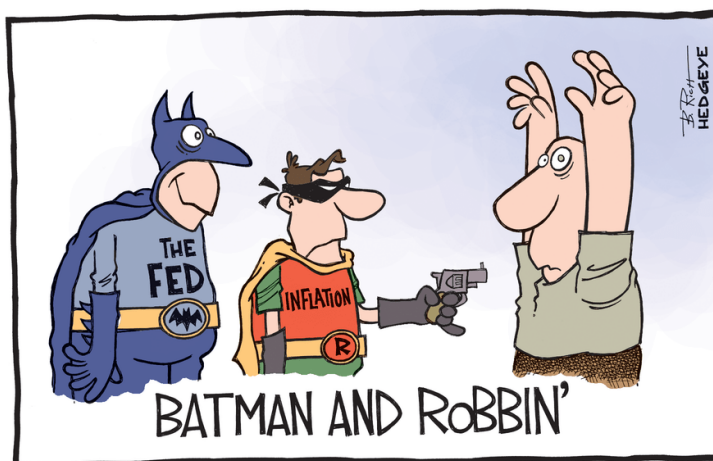
Most recently, inflation seems to have come out on top. This shift to the classic endgame scenario is also confirmed by the “Incrementum Inflation Signal”.

*“In exactly the same way that QE was deflationary in practice when it was inflationary in theory, so will the end of QE be inflationary in practice when it is deflationary in theory.”*

**Ben Hunt**

**But first, let’s have a look at the events of recent months.** Despite the fact that the US central bank has launched its QT, one must bear in mind that prior to this monetary trend reversal, the (central bank) money supply had been expanded massively. Now, we have to wonder why the inflation of the (central bank) money supply is not directly reflected in consumer price inflation (CPI, HVPI etc.). We have already mentioned one reason: The various consumer price indices do not capture asset price inflation, which is why the price increase is happening outside of the perception of large strata of (most) central bankers and politicians.

It also does not come as a surprise that the inflation process via so-called “asset purchasing programs” would first shift the prices of assets. Consumer price inflation (i.e. rising prices) sets in only with a time lag. **Thus, in the first step the seed of money supply inflation grows into asset price inflation, while the bitter fruit of consumer price inflation ripens with a delay.**



Courtesy of Hedgeye

*“Inflation made it possible to divert the fury of the people to ‘speculators’ and ‘profiteers’. Thus it proved itself an excellent psychological resource of the destructive and annihilist war policy.”*

**Ludwig von Mises**

**It is hard to miss the asset price inflation that has happened in recent years.** In addition to substantial increases in bond, property, and share prices, the prices of luxury goods, expensive wines, classic cars, even athletes have also increased significantly. The art market has been affected by asset price inflation as well.

For example, last year the art market set a new record. *Salvator Mundi* by Leonardo da Vinci was sold through an agent to the Saudi (!) crown prince,

<sup>115</sup> Please refer to our “[Chartbook – Monetary Tectonics](#)”, Incrementum AG

Mohammed bin Salman Al Saud (MBS), for USD 450.3mn. After drawing strong criticism from his family, he swapped the small (66 x 46cm) painting for one of UAE (!) crown prince Mohammed Bin Zayed's luxury yachts.<sup>116</sup>

**From our point of view, it is no coincidence that the most expensive paintings have all been sold in the past twelve years.** We do not wish to question the quality of these artworks, but we regard the exploding prices mainly as result of the inflated money supply and financial repression in a broader sense – as a slow flight into material assets.

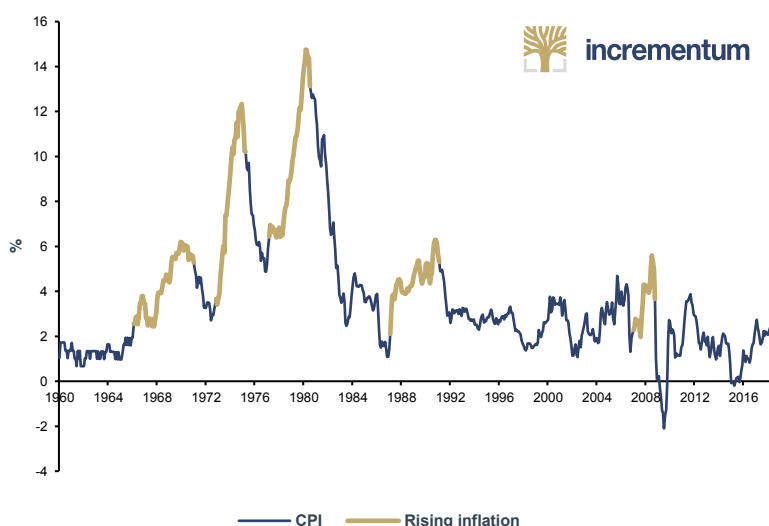
## Inflation to break out of the “comfort corridor”?

*“I think that today’s head-scratcher for the world’s central banks – why haven’t our easy money policies created inflation in the real world? – will soon be replaced by a new head-scratcher – why haven’t our tighter money policies tamed inflation in the real world?”*

Ben Hunt

Historically, fiat currencies have always gone through bouts of depreciation that were significantly more pronounced than the inflation rates targeted by the central banks. Periods of devaluation often follow periods of structurally lax monetary policies, albeit with a time lag of a few years.

### Environment of rising inflation and performance of gold



Sources: Federal Reserve St. Louis, Incrementum AG

<sup>116</sup> See [“EXCLUSIVE: The world’s most expensive painting cost \\$450 MILLION because two Arab princes bid against each other by mistake and wouldn’t back down \(but settled by swapping it for a yacht\)”](#), Daily Mail, March 28, 2018

*“If you impose inflation on stagnation, you get stagflation.”*

**Alan Greenspan**

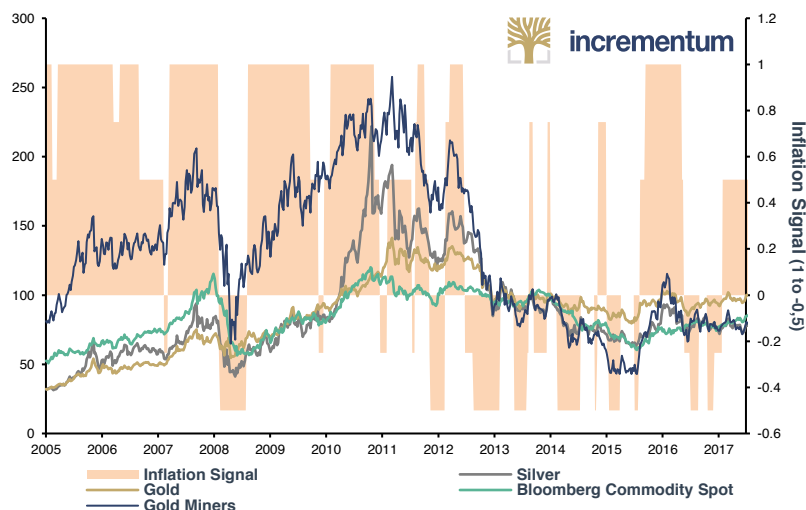
For investors, allocation to inflation-sensitive asset classes is the best positioning for such phases. The performance of gold has also been largely positive in these periods. Investors would record good returns on gold amid high (greater than 2%) and rising (no falling tendency for four consecutive months) rates of inflation.

- 02/1966 – 01/1971: +8%
- 11/1972 – 04/1975: +171%
- 03/1977 – 07/1980: +335%
- 02/1987 – 02/1991: -9%
- 01/2007 – 10/2008: +29%

In order to figure out whether we have entered such an environment, we monitor special indicators on the financial markets from which we distill the

***Incrementum Inflation Signal.***

#### Incrementum Inflation Signal



Sources: Bloomberg, Incrementum AG

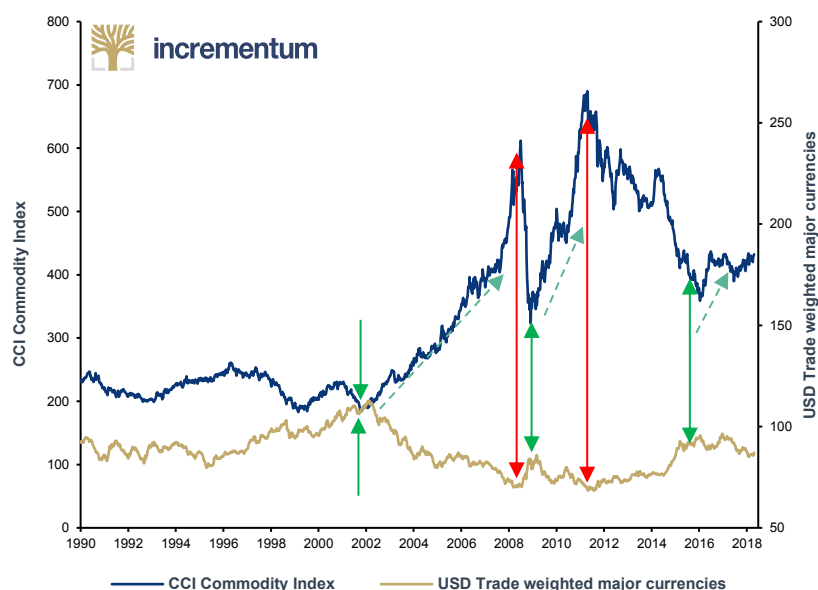
We find that the following sequence of events has happened since the financial crisis in 2008:

- Falling inflation until March 2009
- Reflation until May 2011
- Disinflation until January 2016
- Since then, continuously rising inflation

**In our opinion, the tendency to global inflation returned in January 2016**, as indicated by the low in long-term yields, the low on the commodity markets, the low of the gold price and the turnaround of the US dollar – all of which happened at roughly the same time.



### CCI Commodity Index & US Dollar Index



Sources: Bloomberg, Incrementum AG

At the moment, our inflation signal indicates a rising inflation tendency at a signal strength of 50%. Commodity prices are currently inflation drivers, whereas the weak silver price (compared to the gold price – i.e. high gold/silver ratio) exerts a dampening effect on the overall signal.

*“The problem of oil, it might be tersely said, is that there is always too much or too little.”*

**Myron Watkins**

**For a while it seemed as if the oil price was clandestinely sneaking towards the USD 100 mark again.** Indeed, since our last Gold Report, the price of oil has rallied from USD 47 to USD 80. Many analysts were attributing this rise exclusively to supply and demand factors, which we regard as an oversimplification. All consumable commodities as well as practically all paper money currencies appreciated massively during the same period relative to the US dollar. This simultaneous appreciation of all commodities is tantamount to an inflationary earthquake in our US dollar-centric monetary system. In some countries/regions such as the Eurozone the appreciation has been somewhat contained by the depreciation of the US dollar.

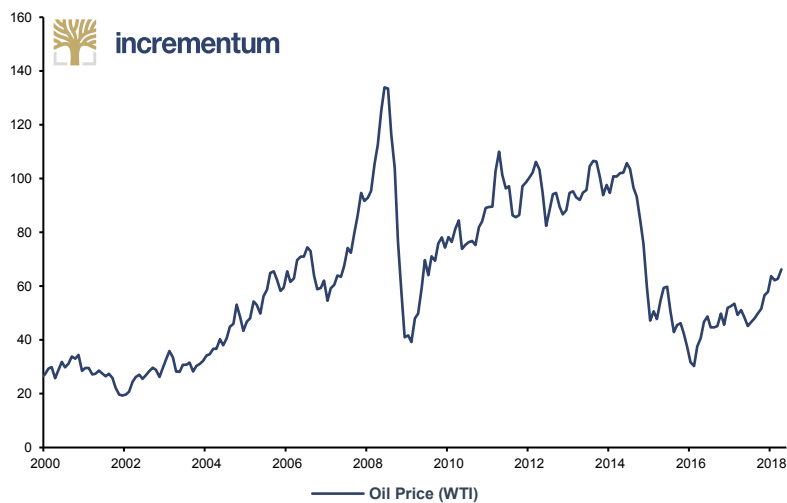
*“If we continue to work the way we do, we will turn from rivals to partners.”*

**Vladimir Putin**

As far as the oil price is concerned, we remain considerably more optimistic than the consensus. While a few years ago “An oil price below USD 100/barrel is impossible” seemed like common knowledge, today’s consensus is “The oil price will be oscillating between USD 45 and 55 in the coming years.” The majority of market participants now find an increase above USD 100 inconceivable.



### Oil price (WTI) in USD



Sources: Federal Reserve St. Louis, Incrementum AG

*“I think that today’s head-scratcher for the world’s central banks — why haven’t our easy money policies created inflation in the real world? — will soon be replaced by a new head-scratcher — why haven’t our tighter money policies tamed inflation in the real world?”*

**Ben Hunt**

### The following factors suggest rising oil prices:

- Geopolitical tensions in the Middle East are tending to worsen rather than subside and harbor the potential for a profound regional conflict, possibly in the form of (another) open proxy war between the USA and Russia, between Saudi Arabia and Iran, and/or between Israel and Iran. The recent withdrawal of the US from the so-called “Iran nuclear deal” increases the tensions further.
- OECD demand cover for 2018 is at the low end of the 5-year average, which is a very bullish outlook for oil prices.<sup>117</sup>
- The reserve capacity of OPEC seems to be below expectations.
- The cooperation between OPEC and Russia has intensified. Together, they control more than 50% of oil production.<sup>118</sup>
- US shale oil seems to be partially “front-loaded”: An MIT study demonstrated that in the Bakken 50% of the recent efficiency gains were attributable to drilling the best locations first (high grading), rather than to gains from applying new technology (e.g., drilling longer laterals with increased fracking stages). So have North American shale operators “front-loaded” low-cost oil from the best locations that will be absent in the future?<sup>119</sup> Moreover, Rosneft CEO Igor Sechin recently pointed out in a presentation that the top 5 US shale companies have been FCF negative in 28 out of the last 29 quarters.<sup>120</sup>
- Saudi Aramco’s IPO: A high oil price is probably in the Kingdom’s interest

So far, rising commodity prices have not lifted inflation rates significantly above the “comfort corridor” of the central banks in the industrialized economies. A persistent upward trend could take the inflation statistics into unpleasant territory

<sup>117</sup> Please refer to “Rystad Energy, April 2018 Webinar – found in “Crude Oil – Are you ready for triple digit oil prices”, Burgraben Holding, April 2018

<sup>118</sup> This cooperation between Saudi Arabia and Russia has recently been stepped up, for example in the area of weapons projects and the construction of nuclear power plants.

<sup>119</sup> See “Crude Oil – Are you ready for triple digit oil prices”, Burgraben Holding, April 2018

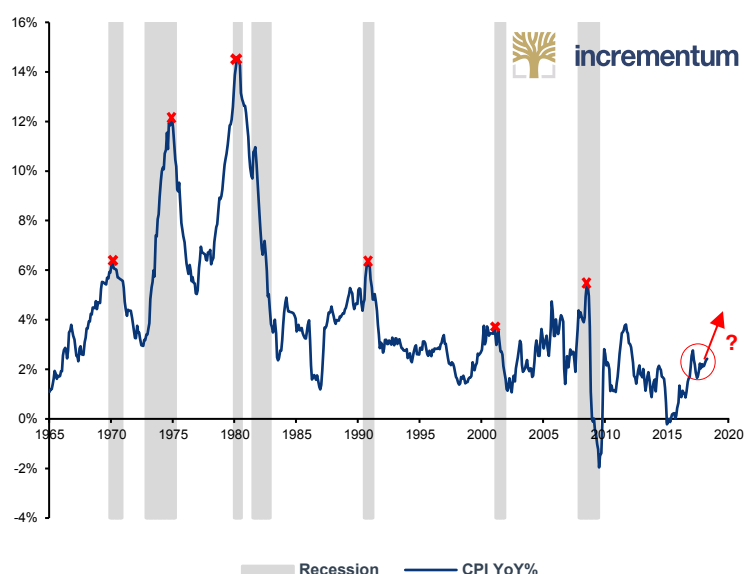
<sup>120</sup> See: “FFIT” April 2018.

as far as monetary policy is concerned. The outlook seems particularly unfavorable for the US dollar region at the moment.<sup>121</sup>

## Inflation and recession

**Rising price inflation has often been the trigger of recessions in past years.** Interestingly, price inflation trails the economic cycle by about 21 months, as the following chart illustrates:

### Cyclical CPI peaks



Sources: Kessler Investment Advice, Bloomberg, Incrementum AG

**Price inflation thus tends to peak when a recession is already almost two years old.**<sup>122</sup> During the previous recession, which NBER considers to have lasted from 12/2007 to 06/2009,<sup>123</sup> the CPI peaked in June 2008, comparatively early during the downturn. **The intuitive assumption that disinflation ensues immediately in a recession is therefore clearly incorrect.**

<sup>121</sup> Eric Cinnamond ([www.ericcinnamond.com](http://www.ericcinnamond.com)) has recently published a great piece called: "[Inflation – Subsiding or Accelerating?](#)" where he lists dozens of examples of rising costs and pricing actions that he gathered from his quarterly earning review process. It seems that CEO's are very, very concerned about wage inflation and rising input prices.

<sup>122</sup> See "Inflation is the caboose of the economy", The Kessler Companies, April 20, 2018

<sup>123</sup> See <http://www.nber.org/>



# Sprott

## Raising the Bar in precious metals investing™

---

We're a global alternative asset manager with a defining focus on precious metals and real assets.

- Asset Management
- Resource Financing
- Wealth Management

Please contact the Sprott Team for more information at [invest@sprott.com](mailto:invest@sprott.com) ▪ 888.622.1813 ▪ [sprott.com/gold](https://sprott.com/gold)

Contrarian. Innovative. Aligned.™

## Conclusion

*“My friend, debt is the very essence of fiat. As debt defaults, fiat is destroyed. This is where all these deflationists get their direction. Not seeing that hyperinflation is the process of saving debt at all costs, even buying it outright for cash. Deflation is impossible in today’s dollar terms because policy will allow the printing of cash, if necessary, to cover every last bit of debt and dumping it on your front lawn!”*

Anonymous author “FOA”<sup>124</sup>

*“Inflation is hell for creditors and paradise for debtors.”*

**André Kostolany**

From the perspective of monetary tectonics, the pendulum has recently swung towards inflation for the first time in a while, and our Incrementum Inflation Signal confirms this trend reversal. In the long run, we therefore clearly expect the psychology of market participants to change. This shift in expectations will manifest itself in rising consumer price inflation. We also consider this scenario more likely because, due to the following grave consequences, both price and monetary deflation are horror scenarios for politicians and have to be avoided *at all costs*:

- Price deflation leads to the real appreciation of debt and the nominal depreciation of assets.
- Debt service becomes (significantly) more difficult.
- Creditors and savers lose money, nominally speaking.
- There are massive tax losses for governments, due to a falling tax base.
- Deflation would have disastrous effects on large parts of the banking system.

*“Inflation is a tax and those least able to afford it generally suffer the most.”*

**Esther George,  
Fed of Kansas City**

**That being said, intermittent periods of deflation cannot be ruled out. We regard the QT program of the Fed as the biggest Sword of Damocles: It is withdrawing liquidity from the market at an increasing rate and could invert asset price inflation.** However, the fact that based on the CoT-report, investors in EUR/USD, oil, and 10Y Treasuries currently hold extremely long positions could also spawn deflationary momentum. In addition, 82% of those fund managers that have been globally surveyed by BofA/Merrill Lynch expect higher inflation rates within a year. The emergence of price-deflationary tendencies sooner rather than later is therefore not unlikely.

In summary, the contradictory occurrence of inflationary and deflationary forces at around the same time is actually just a worrying manifestation of the increasing fragility of the monetary system. The higher the debt, the more threatening is a deflationary shock for the economy and the more stringent the measures that will be taken to avoid such a shock.

<sup>124</sup> The blog FOFA (<http://fofoa.blogspot.co.at/>) is one of our insider tips. We will go into more detail in another edition of the report.



### Most essential inflationary and deflationary factors:

Inflationary forces	Deflationary forces
Zero interest-rate policy	Balance sheet contraction: Undercapitalized banks restrict lending
Communication policy ("forward guidance")	Higher capital requirements
Quantitative easing	Deleveraging by consumers and companies
Operation Twist and similar measures	Regulation (e.g. Basel III, Basel IV)
Currency depreciation ("currency wars")	Debt restructuring (Greece, bail-in)
Fiscal stimulus measures such as spending on infrastructure	Increase in productivity, especially due to technological innovation
Barriers to trade (punitive tariffs) as part of increasing protectionism	Quantitative tightening
Raising of central bank inflation targets	Demographics

Sources: Incrementum AG

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

**Ray Dalio**

In his underrated work *On the Manipulation of Money and Credit*<sup>125</sup> from 1928, Ludwig von Mises described the inflation process and its consequences thus:

*"The moderated interest rate is intended to stimulate production and not to cause a stock market boom. However, stock prices increase first of all. At the outset, commodity prices are not caught up in the boom. There are stock exchange booms and stock exchange profits. Yet, the "producer" is dissatisfied. He envies the "speculator" his "easy profit." Those in power are not willing to accept this situation. They believe that production is being deprived of money which is flowing into the stock market. Besides, it is precisely in the stock market boom that the serious threat of a crisis lies hidden. Therefore, the aim is to withdraw money from stock exchange loans in order to inject it into the "economy."*

*Thus we can see what it means if the central bank of issue aims at domination of the money market. Either the expansion of circulation credit is freed from the limitations which would eventually restrict it. Or the boom is shifted by certain measures along a course different from the one it would otherwise have followed. Thus, the pressure for "control of the money market" specifically envisions the encouragement of the boom—the boom which must end in a crisis. If a cyclical policy is to be followed to eliminate crises, this desire, the desire to control and dominate the money market, must be abandoned.*

***...The most important prerequisite of any cyclical policy, no matter how modest its goal may be, is to renounce every attempt to reduce the interest rate, by means of banking policy, below the rate which develops on the market.***<sup>126</sup>

*We have nothing to add to that.*

<sup>125</sup> The entire text can be obtained for free in German at <https://mises.org/> and in English at <http://oll.libertyfund.org/>

<sup>126</sup> "On the Manipulation of Money and Credit", Ludwig von Mises, 1928, p. 143-149





# Financial Repression – Slowly But Surely, the Screws Are Tightened Further

*“It makes sense not to wait until the next financial crisis to develop plans and, in any event, it is time for economists to stop pretending that implementing effective negative rates is as difficult today as it seemed in Keynes’ time.”*

Kenneth Rogoff

## Key Takeaways

- Calls for an institutional framework for negative interest rate policies to combat the next recession have grown more insistent.
- The ECB proposes to freeze customer deposits at troubled banks for a maximum of five days.
- Even a significant increase in nominal interest rates would change little about the financial repression exerted by negative real interest rates.
- Demands for an EU fiscal and banking union are repeated time and again.

## Financial Repression: Here to Stay

The term *financial repression* has been on everybody's lips at least since the great financial crisis of 2007–2008. Concepts such as low and even negative interest rates and bail-ins are now part of a widely accepted toolbox of macroeconomic torture devices.

*“Current monetary policy is to the detriment of the socially disadvantaged and is not sustainable in the long run, because it threatens social harmony.”*

**Gunther Schnabl**

The basis of such machinations was the stunning insight that conventional monetary policy measures had failed to work in the attempt to combat the crisis. Unconventional measures such as the direct purchase of government bonds in “quantitative easing” programs or the imposition of negative nominal interest rates had long been held to be untenable. Evidently, economic policy winds can shift rapidly, and so policies that were once frowned upon are now considered state of the art.<sup>127</sup>

### What were the low points over the past 12 months?

*Macroeconomic paradigm shift:* Macroeconomists once regarded the *zero bound* as an incontrovertible, essentially natural floor for nominal rates. Kenneth Rogoff, a former IMF chief economist now teaching at Harvard, has made it his mission to lift this mental barrier. In an article published in the *Journal of Economic Perspectives* entitled “Dealing with Monetary Paralysis at the Zero Bound”, he pleads for the abolition of this particular limit on the imagination of central planners. Rogoff argues that the above-mentioned economic and technical objection to the introduction of negative interest rates is possibly already obsolete due to the growing displacement of cash by electronic payments and fintech innovations, or at least will be obsolete soon.

*“When Rogoff quotes Dostoyevsky's statement that ‘Money is minted freedom’, one has to wholeheartedly agree. In a world without cash, human beings are reduced to serfs without rights, in the service of government.”*

**Andreas Toegel, a reviewer on Amazon.de**

**Rogoff considers negative nominal interest rates to be the best option for combating severe recessions.** If they could be introduced on a wide scale, central banks and other policy makers would no longer be forced to rely on what he believes to be inferior measures. Among the latter, Rogoff numbers excessive deficit spending, slow-acting structural reforms, renegotiation of trade agreements, and raising inflation targets. He recommends implementing the required legal and institutional reforms immediately, instead of waiting for the outbreak of the next financial crisis.<sup>128</sup>

**It is noteworthy how strongly critical assessments of Rogoff's recent book *The Curse of Cash: Why Cash Will Disappear* (2016) diverge.**

While assorted establishment mouthpieces are practically falling over each other in fulsome praise of the book, the general public seems to be less than thrilled with Rogoff's proposals, as evidenced by the preponderance of 1-star customer reviews<sup>129</sup> on Amazon.de and Amazon.com:

<sup>127</sup> Given the great significance of financial repression, we have discussed this topic several times in recent years, for instance in:

2017: *“The War Against Cash Enters the Next Round”*, In *Gold we Trust* report 2017, p. 120-123

2016: *“Financial Repression”*, In *Gold we Trust* report 2016, p. 86-97

2015: *“Financial Repression: Escape Route From Overindebtedness?”*, In *Gold we Trust* report 2015, p. 74-80

<sup>128</sup> See Rogoff, Kenneth: “Dealing with Monetary Paralysis at the Zero Bound”, *Journal of Economic Perspectives*, 31 (3), 217, pp. 47-66.

<sup>129</sup> See comments by reviewers in the left-hand panel.



## Kundenrezensionen



## Customer Reviews

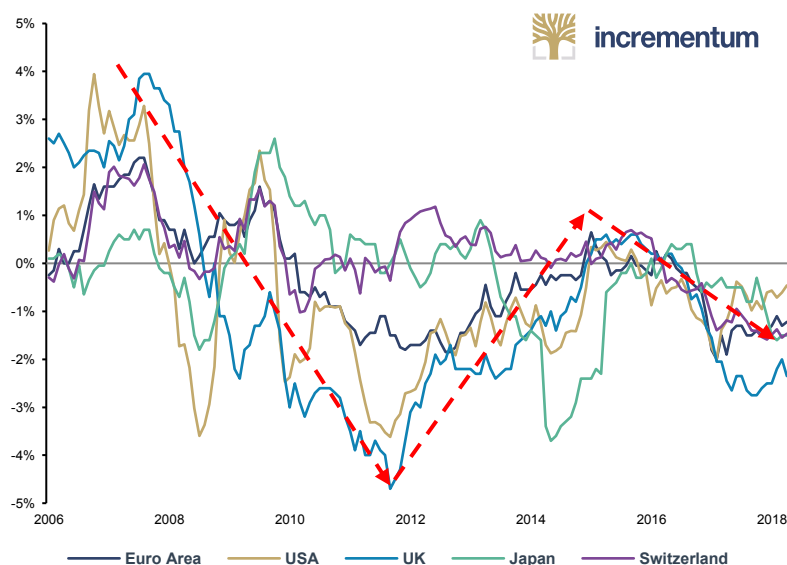


Sources: Amazon<sup>130, 131</sup>

The path forward seems to be marked out already: Because the measures taken so far have not worked – in fact, could not work – cash is to be abolished, because it stands in the way of making a comprehensive negative interest rate policy enforceable. Hitherto, holding cash involved an opportunity cost because cash has no yield, which meant it was inferior to deposit money in this respect. However, it will definitely become more attractive than a deposit in a bank account on which negative interest rates are imposed. We truly live in an upside-down world.

**By now, negative real interest rates have become customary in the largest currency areas**

### Negative real interest rates



Sources: BoE, BoJ, ECB, Fed, SNB, OECD, Incrementum AG

There was a heated debate over the introduction of negative nominal interest rates on commercial bank reserves held at central bank deposit facilities. In fact, there was already quite a bit of commotion before zero interest rates on demand deposits were imposed. **It is frequently overlooked that if price inflation is taken into account, real rather than nominal interest rates are the decisive variable for customers.** In view of inflation rates close to 2%, even a noticeable increase in nominal rates would leave real rates in negative territory. A minor

<sup>130</sup> See <https://www.amazon.de/>

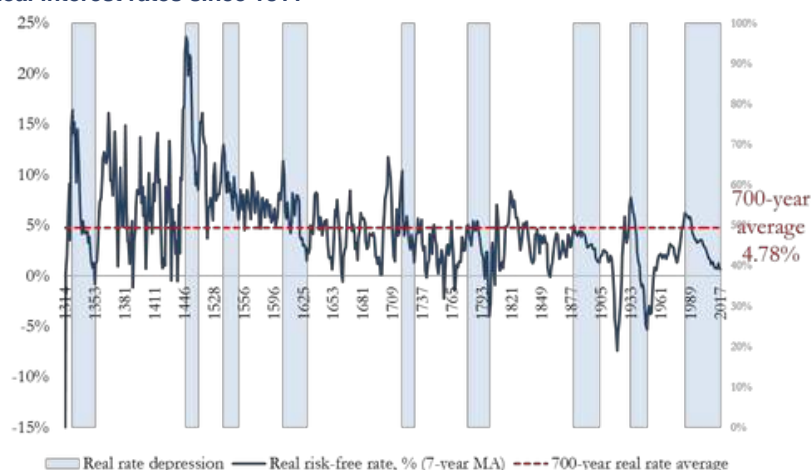
<sup>131</sup> See <https://www.amazon.com/>

*“Soon cash will be considered as disreputable as the smoking of cigarettes: Cash will so to speak become an untipped Camel.”*

**Christian Ortner**

In a study for the Bank of England entitled “Eight centuries of the risk-free rate bond market reversals from the Venetians to the ‘VaR shock’”,<sup>132</sup> Paul Schmelzing calculated both nominal and real interest rates since the year 1311. The 700-year average of real interest rates stood at 4.78%, but in the past 200 years it fell to a significantly lower level of 2.58%. In 1948, real interest rates reached the lowest level ever recorded, when they declined to -5.3%.<sup>133</sup>

#### Real interest rates since 1311



Sources: Paul Schmelzing, Bankunderground.co.uk

#### The study comes to four important conclusions:

- The past 60 years, in which the US was the issuer of the global sovereign bond benchmark, were the most inflationary phase in the entire time period under review.
- Recent headline price inflation rates of just below 2% are fully in line with the ex-post performance of the modern era, and the central bank inflation targets customary today are already highly accommodative in comparison to long-term historical trends.
- Historically, the post-WW2 era is the longest continuous time period without price deflation.
- We are experiencing the one of the longest and strongest bond bull market in history. Only the bull market in bonds from 1441 to 1482 was more pronounced.

**Regardless of the secular downtrend in interest rates – which the BoE study identifies as well – the enormous extent of the financial repression as it is currently exercised becomes crystal clear upon considering these data.** The past 30 years in particular are characterized by artificially created (ultra-) low interest rates. As a result, savers and creditors are missing out on billions in income year in and year out, while treasury secretaries

<sup>132</sup> “Eight centuries of the risk-free rate bond market reversals from the Venetians to the VaR shock”, Paul Schmelzing, BoE Staff Working Paper No. 686 (2017)

<sup>133</sup> Ibid, p. 18





and ministers of finance are enjoying minuscule debt service costs thanks to low and at times even negative yields on government debt.

According to a study by DZ Bank entitled “Weiter wachsende Zinseinbußen privater Haushalte in Deutschland” (“Negative impact on interest rate income of German households continues to grow”), the budgetary savings for large EU countries due to low interest rate policies run to the double-digit billions. Between 2012 and 2015, Italy saved around EUR 53bn, Spain nearly EUR 25bn, and France EUR 7bn. If interest rates were to remain at 2015 levels, the interest cost savings for these three countries plus Germany would add up to around EUR 1.2tn by 2022.<sup>134</sup>

The German government has saved EUR 290 bn in interest expenses since 2008. In 2017 alone, it was estimated that federal and state governments, as well as municipal authorities and state-run social insurance schemes had debt-service cost savings totaling EUR 50bn. Annual debt-service costs declined from EUR 40.2bn in 2008 to EUR 17.5bn by 2016, i.e., less than half as much. From 2007 to 2017 the average yield on newly issued government debt fell from 4.23% to 1.86%.<sup>135</sup>

In 2017 the share of the German federal budget represented by debt-service costs stood at just 5.3% (1999: 16.6%).<sup>136</sup> The low-interest-rate environment contributes to a great extent to the fact that both the federal government budget as well as the total government budget (sum of federal, state, municipal, and social security budgets) are in surplus and Germany’s sovereign debt is decreasing noticeably.

#### Interest payment expenditures in percent of GDP



Sources: Federal Reserve St. Louis

<sup>134</sup> “Weiter wachsende Zinseinbußen privater Haushalte in Deutschland”, DZ Bank May 22, 2017 (“Negative impact on interest rate income of German households continues to grow”)

<sup>135</sup> See “Deutschland spart fast 300 Milliarden Euro”, Handelsblatt, January 11, 2018 (“Low interest rates: German government saves almost 300 billion euros”)

<sup>136</sup> See “Deutsches Stabilitätsprogramm 2018” (Stability Program), Bundesministerium der Finanzen

*“If Germany were to guarantee the liabilities of its euro partners, the countries of Southern Europe could just continue to merrily add to their debts. All the problems they and their French creditors currently have would vanish into thin air for the time being. But a new wave of debt growth would be triggered, which would weaken the competitiveness of the Continent in the long term.”*

**Hans-Werner Sinn**

Alas, the debt-service cost savings of governments are equivalent to the opportunity loss borne by savers, including holders of government bonds. The above-mentioned study by DZ Bank estimates that German savers missed out on a stunning EUR 436bn in interest income up to 2015 alone. After deducting the concomitant decline in the debt-service burden of consumers, the net loss still totals EUR 248bn. This is equivalent to, e.g., 570 Airbus 380 planes,<sup>137</sup> approximately 12,000 km of highway construction, or 0.7 to 1.2 million single family homes. The per capita loss Germans had to put up with comes to EUR 3,024.<sup>138</sup>

*Temporary freezing of bank deposits:* In the course of the complex and protracted reform process instituted in the wake of the financial crisis, a great many things have been tinkered with. One of the new rules under discussion would give the ECB the power to impose a moratorium on withdrawals of bank deposits for a maximum duration of five days.<sup>139</sup> This is supposed to prevent the collapse of a troubled (large) bank as a result of a bank run, and to prevent a chain reaction akin to the one that occurred after the Lehman Brothers insolvency. In order to be effective, such a moratorium would have to encompass the vast majority of deposits. In light of the experience with the confiscation of bank deposits in Cyprus (which started with a surprise “bank holiday”, as well), we must be concerned that the inevitable restructuring following on the heels of a moratorium on withdrawals would very likely involve a bail-in of depositors.

*Burden sharing the French way:* The winds of financial repression blow – not surprisingly – from France as well, in particular from the vicinity of President Emmanuel Macron. France Stratégie, a think tank reporting directly to the president, released a study in the fall of 2017 entitled “Comment assurer la résorption des dettes publiques en zone euro?”<sup>140</sup> (“How to ensure the reduction of public debts in the euro zone?”). It presents unconventional ways of reducing government debt, such as the proposal that strongly indebted member states should make themselves co-owners of private real estate holdings. The actual owners are to be enjoined to pay a special annual tax. Should no payment be made, the sums owed would be collected upon the sale of the properties concerned or in the event of the properties being transferred to a new owner in the course of an inheritance. In other words: Compulsory liens on private property are to return in a slightly modified form.<sup>141</sup>

*Fiscal union (A.K.A. “debt union”):* Time and again renewed demands for the fiscal integration of the EU are made, particularly by Paris. Should such a federalization of debt indeed be implemented – which would inter alia involve the nomination of a minister of finance for the euro zone – it would be tantamount to coercing the citizens of comparatively less indebted countries into taking on additional debt and accepting a politically imposed net loss in wealth. While the governments of countries such as Germany and Austria have succeeded in posting balanced budgets or even budget surpluses in the recent highly favorable macroeconomic

<sup>137</sup> See “Die Listenpreise von Airbus für 2017”, AeroTelegraph.com, (“2017 Airbus list prices” [Airlines never pay list prices, though – the discounts are often substantial; ed.])

<sup>138</sup> See “EZB-Politik kostet deutsche Sparer 436 Milliarden Euro”, F.A.S., updated on May 20, 2017: (“ECB monetary policy costs German savers 436 billion euro”)

<sup>139</sup> See “Bank Deposits No Longer Off Limits as ECB Seeks Power to Freeze”, Bloomberg, November 14, 2017

<sup>140</sup> See <http://www.strategie.gouv.fr/>

<sup>141</sup> See “Enteignung für den Schuldenabbau”, Handelsblatt, October 11, 2017 (“Reducing sovereign debt by expropriation”)





environment of solid growth and extremely low interest rates, France is celebrating the fact that its budget deficit of 2.6% of GDP has come in below the Maastricht limit of 3% for the first time in ten years. In fact, for the first time since the introduction of the euro in 1999, all member countries of the euro zone have managed to stick to the 3% budget deficit limit stipulated by the Maastricht treaty.<sup>142</sup>

*Banking union:* The envisaged banking union represents a variant of the debt union concept, particularly with respect to the planned common deposit insurance scheme (EDIS: European Deposit Insurance System). The EU Commission launched the proposal for an EU-wide deposit insurance scheme in the fall of last year. Not surprisingly, the proposal met with considerable resistance in Germany. Critics of the proposal went as far as asserting that there was the threat of a loss of confidence by German savers with respect to these protection schemes (which are currently still managed on the national level).<sup>143</sup> After all, the proposal ultimately implies that depositors in countries with sound banking systems will assume the contingent liabilities of depositors in countries with shaky banking systems. Italy's banking industry is particularly worth mentioning in this context, as its NPL ratio of 15.3% is precisely three times larger than that of leading systemically important banks in Europe as a whole.<sup>144</sup>

*"A federalization of sovereign debt within the euro zone would represent an utterly misguided concept of solidarity. Such a measure would inevitably invite moral hazard and would immediately counteract all political efforts to implement (finally!) urgently needed structural reforms in the countries concerned."*

**Leef H. Dierks**

Just as spirited as the resistance to this proposal is - particularly in Germany - so tenacious are EU centralizers in pushing for its adoption. Especially Emmanuel Macron, who won the French presidential election last year practically out of the blue and is widely considered a veritable whiz kid who never tires of clamoring for more centralization. In a meeting with Germany's eternal chancellor Angela Merkel, the subject was once again on the table. After the meeting Merkel was quoted as saying, *"Perhaps not in the immediate but in a more distant future, we will also be prepared to establish a common deposit insurance scheme."*<sup>145</sup> A dangerous threat indeed, particularly for savers in financially comparatively sound countries.

<sup>142</sup> See *"Erstmals halten alle Euro-Länder die Schuldengrenze ein"*, Welt, April 5, 2018 ("Maastricht: for the first time, all euro zone countries comply with the budget deficit limit")

<sup>143</sup> See *"Brüssel wagt neuen Vorstoß in der Einlagensicherung"*, FAZ, October 6, 2017 ("Brussels in renewed push for deposit insurance scheme")

<sup>144</sup> See *"NPLs in Italy's banking system"*, Banca d'Italia

<sup>145</sup> *"Macron und Merkel wollen europäische Bankenunion"*, Die Presse, April 19, 2018 ("Macron and Merkel want European banking union")



# YOUR LEGACY, YOUR VALUES, OUR EXPERIENCE.



Tocqueville Asset Management is proud to support  
the “In Gold We Trust” report as a premium partner.

At Tocqueville, our commitment to the preservation of wealth over the long term  
relies on thoughtful diversification and a prudent allocation to gold and other hard assets.



FOR FURTHER INFORMATION PLEASE CONTACT US AT  
[INSTITUTIONAL@TOCQUEVILLE.COM](mailto:INSTITUTIONAL@TOCQUEVILLE.COM)  
(212) 903-0300

©TOCQUEVILLE ASSET MANAGEMENT L.P.  
ALL RIGHTS RESERVED

## Conclusion

**In 2017, no easing of the tensions on the financial repression front could be discerned.** It is of course hardly surprising that the previous trend has continued. None of the existing fundamental economic, fiscal, and monetary distortions have come any closer to a resolution in recent years. All too often mere symptoms were fought, without striking at the root causes. The recently very strong performance of the economy, a Potemkin village of illusory growth propped up by interest rate manipulation, merely masks a vast array of dangerous structural imbalances. Instead of taking advantage of the favorable economic backdrop in order to correct these imbalances, policy makers preferred to stick to the comfortable path of kicking the can further down the road and preserving the status quo.

**There are two implications for gold.** For one thing, the prolongation of the monetary policy distortions, including the threatened and already partially implemented bail-ins of bank deposits, increases potential price targets. Secondly, it is still possible to purchase gold anonymously, and that option becomes ever more attractive, even though gold is facing strong competition these days from emergent cryptocurrencies.



# The Failure of Macroeconomics

On the destructiveness of counter-structural policies within the financial cycle

*“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

## Key Takeaways

- Current monetary policy assumes a permanent state of depression, dubbed *secular stagnation*, which has fueled “the Everything Bubble”.
- We argue that the global economy is instead experiencing deeper financial cycles as a result of profound monetary policy mistakes, with imminent disastrous consequences for people invested in the *status quo*.
- Political, economic, and financial volatility are on the cusp of erupting, resulting in lower financial asset valuations, and probably higher valuations of “insurance”, i.e. precious metals.



## The Failure of *Counter-Structural Policies*<sup>146</sup>

*“People are complaining about inflation, but they delightfully support political measures which can only be realized with the help of inflation”*

Ludwig von Mises

Economists thought the 1930s were a period of secular stagnation...

**In 1939, Alvin Hansen suggested that in a society suffering from low population growth, a free-market economy would not be able to produce the desired level of investment to fully employ productive resources.**<sup>147</sup> The staunch Keynesian Hansen suggested a “positive program designed to stimulate consumption” as the only way out of the predicament of the day. He obviously wrote in a time of “sick recoveries which die in their infancy”, and then, as today, the “essence of secular stagnation” plagued the Western world. Sporadic recoveries would occur on the back of depreciated capital, opening up temporary investment opportunities, but a full-fledged recovery was seen by him as impossible without intervention. Ominously, Hansen wrote that “[t]otalitarian states have the great advantage”, as they can easily check the runaway inflation that is eventually caused by large and persistent public spending programs.

...and so do mainstream economists today

When famed economists like Larry Summers bring the secular stagnation thesis back to life, they envision a world similar to Hansen’s; and of course they resort to the same remedies in the attempt to rectify the perceived market failure due to underinvestment. Since government spending has been frowned upon ever since the left to right pendulum shift embodied by Thatcher and Reagan, the burden of creating enough nominal demand has fallen on the shoulders of central bankers. These panjandrums employ tactics such as lowering the cost of debt by manipulating interest rates and creating wealth effects to deceive the public into *feeling* richer than it really is, so that it might consume more of the excess capital.

<sup>146</sup> This chapter was contributed by our dear Hans Fredrik Hansen, who worked as a senior economist for several large multinational oil companies, in the US, Europe and the Middle East.

<sup>147</sup> “Economic Progress and Declining Population Growth”, Alvin Hansen, American Economic Review, Volume XXIX, March 1939



### Net Worth vs. GDP (Rebased 1990 = 1) and Net Worth as a Share of DPI



Sources: Federal Reserve St. Louis, BEA, HFH, Incrementum AG

Crisis responses from central banks have created a massive bubble...

... which has fueled expansion of counterproductive debt.

**Data from the United States shows that household net worth has been growing far faster than underlying fundamentals suggest is reasonable.**

A similar conclusion can be arrived at by comparing the ratio of household net worth to nominal GDP. Logically, this ratio should mean-revert with time, but from the onset of Greenspan's management of aggregate demand, the ratio has broken with its old trend, and household assets are now valued consistently higher compared to output than they used to be. Instead of worrying central bankers, these obvious bubbles and disconnections are welcomed as a convenient remedy for secular stagnation.

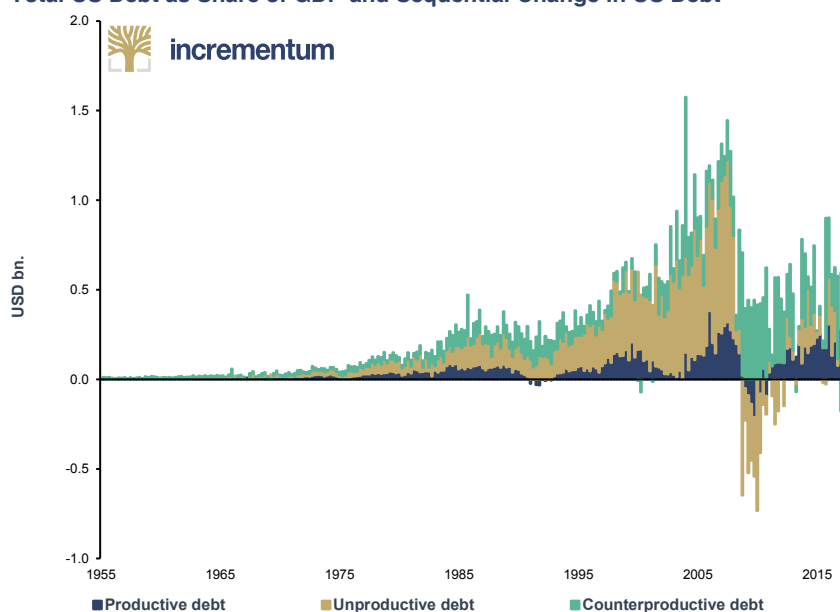
Since it believes that one man's debt is another man's asset,<sup>148</sup> the Keynesian tradition is not particularly concerned with high, and growing, debt levels. However, as shown here last year<sup>149</sup>, debt used for current consumption acts as a net drag on economic growth. Unless debt is applied to expand productive capabilities, it can lead only to falling standards of living. Although the immediate "sugar high" from credit-based consumption may feel good, only productive debt constitutes another man's asset. All other debt destroys economic growth and ultimately the social fabric.

<sup>148</sup> Most debt takes the form of past consumption, which cannot produce future output (yield) and thus cannot be regarded as an asset proper. However, on a balance sheet these debt liabilities will be "another man's assets", which make their owners feel richer than they are and thus mask the underlying structural weakness these "assets" represent.

<sup>149</sup> See "The Age of Capital Consumption", *In Gold we Trust* report 2017, p. 91



Total US Debt as Share of GDP and Sequential Change in US Debt



Sources: Federal Reserve St. Louis, HFH, Incrementum AG

**This year we will show that central bank demand management also gives rise to financial cycles. These cycles are inherently bound to occur with ever greater amplitude, as interventions to stop past capital misallocations being properly cleared by the market must inevitably grow larger with every cycle.**

Western crisis policies have been transmitted to the rest of the world through the trade channel...

Furthermore, mercantilist economies with exchange-rate pegs to the dollar will experience financial cycles increasingly out of phase with that of the US. This is particularly notable between the world's ultimate consumer (the US) and its chief manufacturer (China), a disjuncture that is bound to cause a range of problems in the years ahead.

As opposed to the *structural demand deficiency* proposed in the secular stagnation hypothesis, a financial-cycle view focuses on mispriced, and hence misallocated, capital. Capital consumption in the boom phase is recorded as healthy GDP growth and thus promotes the fallacious idea of *potential* output prior to the inevitable crisis and therefore creates unrealistic expectations of economic performance after the bust.

To make sense of the disappointment, economists resort to academic abstractions, completely separated from reality. Concepts such as the *neutral* rate of interest, which apparently has fallen close to zero or even below it, are used as arguments for why the central bank must be an active manipulator of money markets.

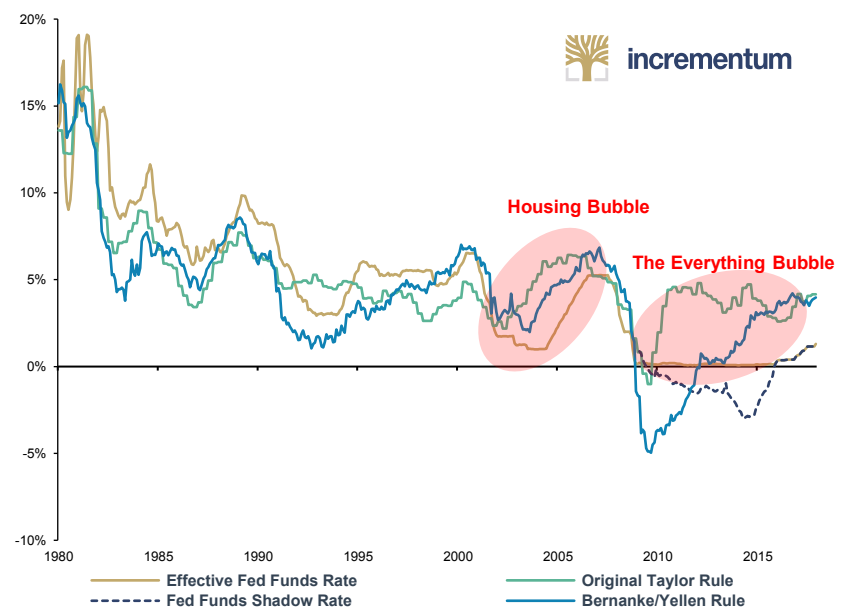
Funnily enough, as asset price bubbles get out of control, even the macroeconomic abstractions concocted by central bankers to "manage" the economy have to be tweaked to justify the maddening pace of monetary policy accommodation needed to paper over the consequences emanating from previous bubbles.

...a process exacerbated by rationalizing away any need to restrict ourselves.

**Take the popular Taylor rule as an example.<sup>150</sup> Once lauded as a good benchmark for sound monetary policy due to its consideration of differences between growth and “potential growth” and also of deviations from the price inflation target, it is now seen as a “barbarous relic” restricting central banks, just as gold once was.**

Although both Bernanke and Yellen modified the rule to fit their narratives and eventually ended up disregarding the rule, just as central banks once made gold backings more elastic, there is no hiding the fact that the Fed is hopelessly behind the curve. The big red areas in the chart below is testimony to that and substantiate the lack of mean reversion shown in the earlier charts. The chart also explains why debt is rising (because it *can*, as the cost of servicing said debt falls along with lower rates of interest) and why productive debt is lagging other more destructive forms of credit as profligacy is subsidized by taxing production.

### Federal Funds Rate vs. Taylor Rule



Sources: BEA, BLS, Federal Reserve St. Louis, HFH, Incrementum AG

The financial cycle proves to be a good alternative explanation...

Which leads us to the financial cycle, defined as “*self-reinforcing interactions between perceptions of value and risk, attitudes towards risk, and financing constraints, which translate into booms followed by busts*”.<sup>151</sup> More specifically we look at trend deviations, using a so-called bandpass filter, in an index consisting of the ratios of nonfinancial credit to GDP, real credit and real house prices. These variables capture both perceptions, through house prices,<sup>152</sup> and credit availability in the economy. We also apply a similar bandpass filter to real GDP to get an alternative view of the business cycle.

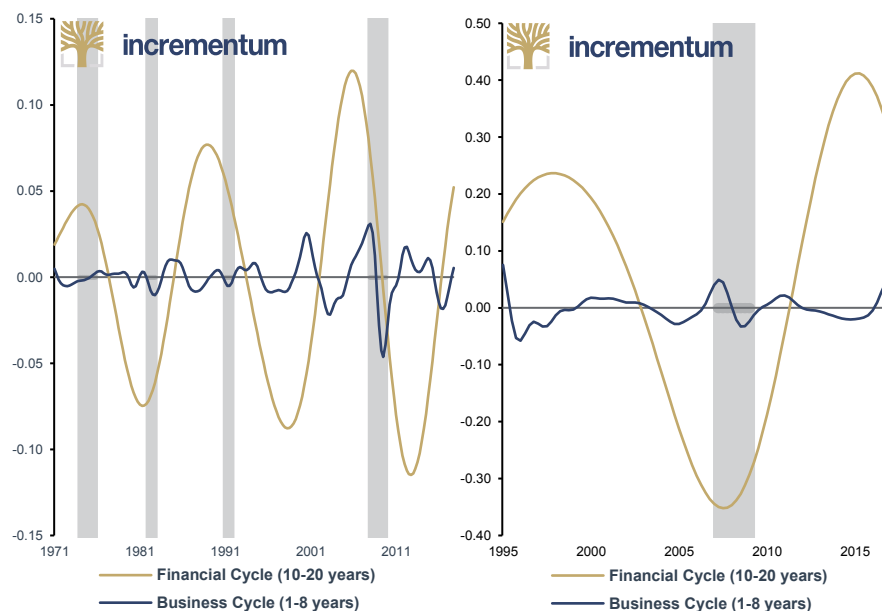
<sup>150</sup> The Taylor rule is a way to calculate a reasonable approximation of what the central bank interest rate *should* be based on (a) deviation from a preset price inflation target and (b) the output gap measured either as the difference between current output and *potential* output, or the unemployment rate compared to “full” employment.

<sup>151</sup> For more details on the financial cycle see “The Financial Cycle and Macroeconomics: What have we learnt?”, Claudio Borio, BIS Working Paper No 395

<sup>152</sup> For the US economy we also include total household financial assets as these add to the perception of wealth and hence help drive the US credit cycle through both ‘animal spirits’ and collateral values provided to commercial banks which are the ultimate purveyors of money to the economy.

From the 1970s there have been three financial cycles, with increasing amplitudes. It is no coincidence that over this same timespan the Fed has been operating with no restrictions on its conduct of monetary policy. Likewise, the underlying economic cycle has also deviated more and more from trend.

#### US (left) & China (right) Fin. Cycle vs. Bus. Cycle (Value Relative to BP Trend)

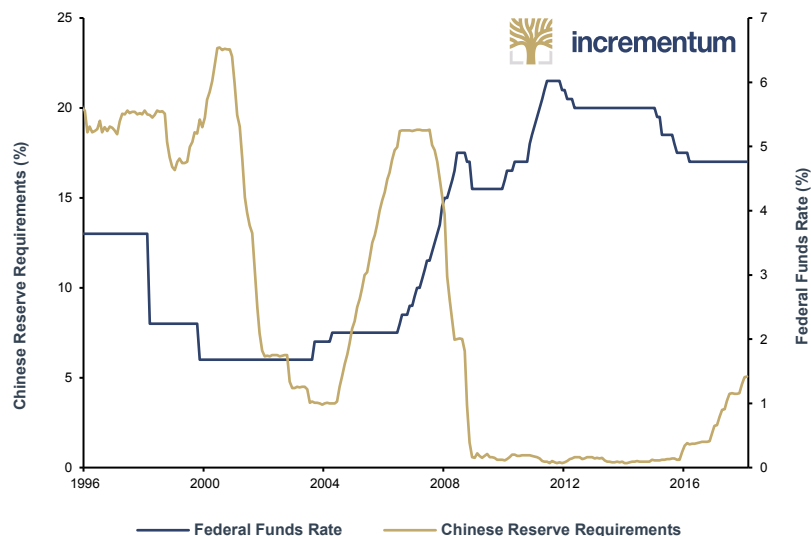


Sources: BEA, BIS, BLS, Federal Reserve St. Louis, HFH, NBER, Oxford Economics, Incrementum AG

...of the odd trade relationship  
between the US and China

**Plotting the same data for China depicts a financial cycle out of sync with that of the US.** Pegging the yuan to the US Dollar has made Chinese monetary policy procyclical: Whenever the Fed lowered the cost of USD liquidity, demand for Chinese exports grew faster, boosting US dollar flows into the Chinese economy. To avoid yuan appreciation, the PBoC had to sterilize dollar flows by printing local currency and buy incoming dollars, boosting local commercial banking reserves and consequently domestic inflation. Although this process should have coordinated financial cycles, the PBoC also simultaneously raised reserve requirements to stem (some) of the inflationary effects on the domestic economy. PBoC reserve requirements have thus been inversely related to the US federal funds rate. In other words, economic cycles got synchronized through the trade channel whilst financial cycles became asynchronous through the inverse relationship between US federal funds rate and PBoC reserve requirements.

### Federal Funds Rate vs. Chinese Reserve Requirements



Sources: Bloomberg, HFH, Incrementum AG

**Such macroeconomic management worked reasonably well when both economies operated at low leverage levels, but at “peak debt” there is less room to maneuver, which makes the current turning point in the financial cycle particularly interesting.**

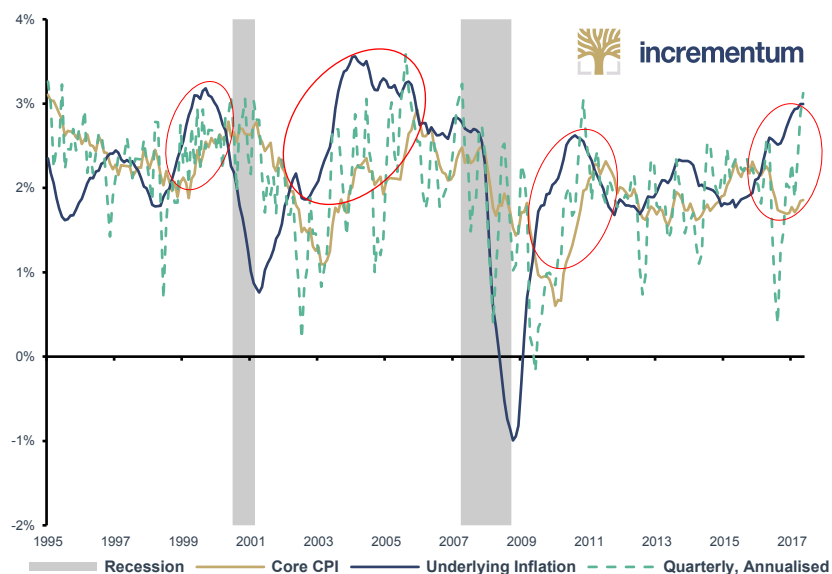
The US economy is at a very late stage of its business cycle...

The US economy is clearly at a very late stage of the business cycle, with the current expansion soon to be the second longest in US history. At this point in the cycle, inflationary pressure commences and the Fed is forced to tighten monetary policy. As shown above, the financial cycle is also well advanced, with equity valuations at nosebleed levels, house prices breaking through pre-crisis peaks, yield spreads compressed, and financial conditions as loose as ever.

**As in every past cycle, this one will also be punctuated by a central bank desperately trying to catch up with an out-of-control financial cycle.**

Inflationary pressure is visible for all to see. The US “core” Consumer Price Index was up 2.1% in February compared to the same month last year. Momentum, measured as the quarterly change at an annualized rate, has moved from 1.9% in November to more than 2.5% in the most recent update from the D.C. statistical mill. The Federal Reserve Bank of New York looks at an underlying inflation gauge, which historically has proven to signal shifts in consumer price inflation. Its latest reading stood at 3.2%, substantiating the recent strength witnessed in momentum within the core CPI. It does not matter how many interest rate hikes (if 25bp can really be considered a “hike”) the market can withstand before it crashes. The Fed is destined to give the economy exactly the amount needed to pop the “everything bubble” sooner or later.

Core CPI vs. Underlying Inflation, YoY



Sources: BEA, BLS, Federal Reserve St. Louis, HFH, Incrementum AG

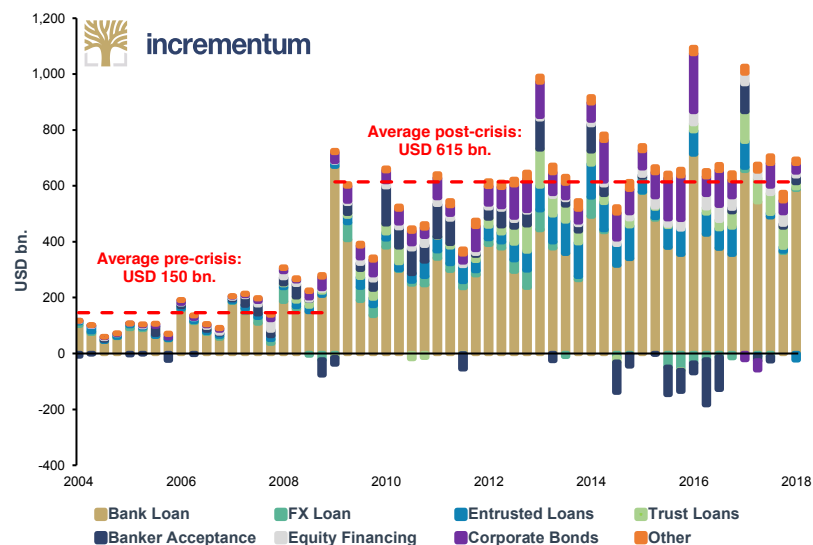
... while China's boom is about to turn into bust.

Simultaneously in China, the situation is the exact reverse of that facing the Fed and the United States. At peak debt, old relationships do not hold. When the Fed started raising rates, the PBoC could not stimulate as it used to do, due to massive capital flight out of Mainland China. Capital flight tells us that people are losing confidence in the Chinese growth miracle. Over a trillion USD in FX reserves were used to maintain a semblance of exchange rate stability. The PBoC's refraining from another bout of widespread stimulus essentially brought the financial cycle in China to a peak. Economic activities dependent on continuous credit creation, i.e. zombie companies, are coming under pressure. Shadow banking is in retreat as Chinese authorities try to move credit creation, lending, and borrowing back into the regulated part of the financial system.

Still, the inconsistencies that have built up in the Chinese economy mean that something must give eventually. Nonperforming loans will soon start to overwhelm a banking system that has funded a "bubble economy" for years. As the PBoC is forced to retrench, zombie companies will no longer be allowed to roll over debt, and default rates will surge. Despite all the China bears having gone back into hibernation, a government sponsored bailout is more or less assured at this point. That will mean lower interest rates, aggressive money printing, and the complete elimination of any remnants of the exchange rate peg.

Simply by comparing Chinese credit growth before and after the financial crisis, we get a feel for a panic-stricken government acting on the go. Prior to the crisis the Chinese economy maintained "full capacity" by adding about USD 150bn of credit per quarter. After the crisis the economy needed more than USD 600bn, with many quarters routinely exceeding the one trillion mark.

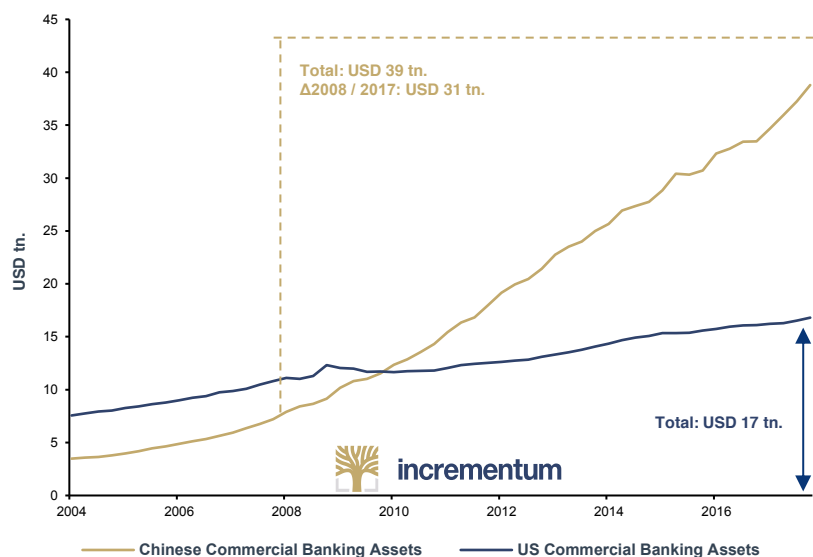
### Quarterly Change in Chinese Total Social Financing



Sources: Bloomberg, HFH, Incrementum AG

Needless to say, the Chinese banking system grew exponentially on the back of such reckless credit creation. **From the crisis up to the present, Chinese banks have added more than USD 30trn in assets, for a total of almost USD 40trn in assets in a USD 12trn economy. For comparison, the total amount of assets in the US banking system is around USD 17trn.**

### Commercial Banking Assets: China vs. USA



Sources: Bloomberg, Incrementum AG

**There is no way that any economy, no matter how efficient it may be, can productively allocate over USD 4trn in new credit per year without funding many unproductive endeavors.**



## Conclusion

Peak debt constrains policy makers from intervening...

**In the pre-“peak-debt” era governments had far more leeway to literally paper over any problems arising from market forces being suppressed for too long.** At peak debt the disconnect of the US and China financial cycles will lead to a radically different dynamic than we are all used to. Assuming, as we prudently do, that the structural-demand deficiency theory is wrong, there cannot be a perpetual state of money printing at rock-bottom interest rates. On the contrary, we are about to face a period of elevated volatility as the world’s largest trading bloc, dubbed Bretton Woods 2, will be forced to deal with out-of-phase financial cycles at peak debt.

**Whilst the US and its central bank struggle with stagflation, debating how much overshoot above the 2% target inflation will be tolerated, the Chinese will print yuan unabated to deal with their own “Lehman moment”.** As the growth miracle comes to an end with *Emperor* Xi at the helm, Chinese foreign adventures will intensify, forcing the Americans to counter. Today’s minor trade squabble may soon turn into a proper trade war.

...ensuring higher volatility in the immediate future.

As the world economy now tentatively exits the “eye of the hurricane”, we are about to experience the after-blasts of a financial crisis that was never appropriately dealt with ten years ago. **Suppressed economic, financial, and political volatility will soon burst out from the current artificial state. Financial assets may plummet in value as a result, while tangible assets, most notably precious metals, acting as insurance against uncertainty, may rise tremendously.**

# Competing Currencies and Digital Money: How Hayekian Are Cryptocurrencies?

*“The history of government control over money is, with the exception of a few fortunate time periods, a history of unceasing deceit and fraud.”*

Friedrich A. von Hayek

## Key Takeaways

- Economic crises are often attributable to governments abusing their monopoly on money.
- Hayek pleads in favor of private currencies which can evolve in a decentralized discovery procedure and are free to compete with government issued fiat money as well as against each other.
- Free choice in currencies on the part of money users would give both private suppliers of money and governments an incentive to issue sound money and exercise fiscal discipline.
- Cryptocurrencies harbor the potential for the emergence of a competitive monetary order.
- *“Hayek would prefer gold to Bitcoin”*: Interview with Dr. Richard Zundritsch, F.A. Hayek’s nephew

## The government monopoly on money – for a long time unquestioned

*“I do not think that it is an exaggeration to say that history is largely a history of inflation, and usually of inflations engineered by governments and for the gain of governments.”*

Friedrich August von Hayek

**It is a truism that monopolies are detrimental to economies.** They are inefficient with respect to quality and cost, their price fixing generates welfare losses, and beyond this, they occasionally waste substantial resources merely on erecting barriers to entry for competitors.<sup>153</sup> In an efficient economic order, monopolies are therefore either prohibited or are at least subject to curbs.

Natural monopolies<sup>154</sup> and government monopolies represent special cases. The latter are based on the notion that the state is able to fulfill certain tasks either more efficiently or in a more “social” manner than private suppliers are. These tasks include security (the monopoly on the legitimate use of physical force), state-run health insurance schemes, and the provision of transport infrastructure.

*“The motive of protecting and expanding political power ultimately infuses the entire history of money, which can be read as a history of monetary manipulation.”*

**Norbert F. Tofall**

**The monopoly on money is a very powerful tool at the state’s disposal,<sup>155</sup> and it’s a monopoly that has been abused for about as long as it has existed.<sup>156</sup>** Already in antiquity the funding of wars was accomplished by systematically diluting the precious metal content of coins, which over time pushed the value of their precious metal content ever further below their nominal value.<sup>157</sup> Rulers across history have succumbed to the temptation of increasing their seigniorage income or of generating indirect tax revenues by means of inflation. Such behavior was eventually institutionalized in the form of the two-tiered banking system we know today — with money creation through the interplay between central banks (issuance of central bank money) and commercial banks (deposit money creation through lending of circulation credit) also known as fractional-reserve banking – which drapes a veil over the collection of seigniorage

<sup>153</sup> A special case is temporary monopolies, which generate so-called “pioneer profits”. Companies can, for instance, obtain patents for innovations, which protect them for a limited time from imitations of their products made by competitors. The idea is that the state temporarily restricts competition for a time via the patent system in order to promote competition over the long term, since many companies won’t regard the required R&D spending as economically viable if there is no prospect of making temporary monopoly profits. See “Theory of Economic Development”, Joseph Schumpeter 1911

<sup>154</sup> Natural monopolies are the result of a cost structure (in most cases involving high fixed and low marginal costs) in which competitors are held to raise the total cost of supplying a good. Examples for this are railways, which have high fixed costs in the form of rail networks, and power and water utilities, which require electrical grids or piping systems for distribution.

<sup>155</sup> We are going to refer to the “state (or government) monopoly on money” in this section, even though it is nowadays usually not the central bank itself that produces new money. (Exceptions are QE, repos, and coupon passes, which affect the money supply directly and indirectly over a wide range of time frames.) Most money production results from inflationary lending by fractionally reserved private commercial banks (with central bank support), i.e., it is so to speak the result of a private-public partnership. Regardless, the government ultimately decides what may be used as legal tender.

<sup>156</sup> See “Monetary Regimes and Inflation. History, Economic and Political Relationships”, Peter Bernholz, Cheltenham, 2003

<sup>157</sup> See “The Monetary Aspect of the Fall of Rome”, In *Gold we Trust* report 2016, pp. 98-103, or “The Frogs”, Aristophanes, pp.719-737



profits.<sup>158</sup> Latter-day efforts to stabilize the financial system and save the euro in response to the financial crisis are blending seamlessly into this history of abuse.

Thus it is hardly surprising that criticism of the monetary and financial system has a long tradition as well. **However, even intellectuals who placed individual liberty at the center of their deliberations hardly ever questioned and question the state monopoly on money as such – despite all the criticism leveled at the monetary system.**<sup>159</sup>

## Hayek's Proposal of Introducing Competing Private Currencies

*“Everything comes down to the question: Which forms of order promote liberty?”*

Walter Eucken

*“The profit the government makes from diluting coinage is unjust ... every mutation of coinage, apart from a few exceptions, takes money from subjects against their will.”*

Nicolas d’Oresme

**When Richard Nixon suspended the US dollar’s convertibility to gold in 1971, it became obvious that the attempt to establish a monetary system based on a gold-exchange standard had failed due to overissuance of uncovered money substitutes.** Upon this event Friedrich August von Hayek felt compelled to reexamine the question of what constituted an expedient monetary order.<sup>160</sup> In Hayek’s opinion, not only the abolition of the tie between the US dollar and gold but also the proliferation of Keynesian economic thinking at the time worsened the prospect of a stable, noninflationary money ever emerging under a government-run currency monopoly.<sup>161</sup> In 1975 Hayek eventually gave a lecture entitled “Choice of Currency”<sup>162</sup>, in which he articulated for the first time the provocative demand that the state monopoly on money should be repealed. The publication of the monographs *Free Choice in Currency* and *The Denationalization of Money* followed a year later, in which he expanded in greater detail on his ideas on competition between private money issuers.

<sup>158</sup> See “The Zero Interest Rate Trap: Sustainable Wealth Accumulation in a Non-Sustainable Monetary System”, Ronald-Peter Stöferle, Mark J. Valek, 2018 (to be published shortly)

<sup>159</sup> Hayek noted that the economic literature offered no answer to the question of why a government monopoly for the provision of money was deemed indispensable, nor was there any academic discussion examining the abolition of this monopoly (“The Denationalization of Money”, Friedrich A. von Hayek, 1976, p. 26 ff). He attributed the notion that governments had a quasi-natural prerogative to be the exclusive suppliers of money to the historical fact that they had usurped the right to mint coins a very long time ago and then simply retained it as if this were a perfectly natural state of affairs (“The Denationalization of Money”, Friedrich A. von Hayek, p. 28).

<sup>160</sup> What makes this very interesting is the fact that Hayek previously espoused quite contrary views: “[A] really rational monetary policy could be carried out only by an international monetary authority [...] [S]o long as an effective international monetary authority remains an Utopian dream, any mechanical principle (such as the gold standard) ... is far preferable to numerous independent and independently regulated national currencies” (“Monetary Nationalism and International Stability”, Friedrich A. von Hayek, 1937, p.93ff). Later Hayek wrote that a free currency market was “not only politically impracticable today, but would probably be undesirable if it were possible” (“The Constitution of Liberty”, Friedrich A. von Hayek, 1960, p.324ff). Nevertheless, what unites the different positions Hayek has taken over time is his desire to create a noninflationary monetary order. Moreover, the evolution of his position illustrates his growing skepticism with respect to the state.

<sup>161</sup> See “Toward a Free Market Monetary System”, Friedrich A. von Hayek, p.2

<sup>162</sup> See “Choice of Currency: A Way to Stop Inflation”, Friedrich A. von Hayek, The Institute of Economic Affairs, 1976





*“It is impossible to grasp the meaning of the idea of sound money if one does not realize that it was devised as an instrument for the protection of civil liberties against despotic inroads on the part of governments. Ideologically it belongs in the same class with political constitutions and bills of rights.”*

**Ludwig von Mises**

**Hayek’s core thesis was that the entrenched abuse of the state monopoly on money for the purposes of enriching selected private groups, making good on fiscal deficits, or financing wars illustrates that concentrating the power of money issuance in the hands of the state (or any other centralized entity) does not work. Hence government has to be deprived of its monopoly on money creation, which should be replaced by a market-based monetary order that constitutes a system of power-sharing among competing entities.**

What shape would an order reflecting these power-sharing principles take, and how could it emerge? Hayek argues that such an order would take shape if the following liberties were granted:

- Private money producers would be free to issue money and enter into currency competition.
- Citizens would be free to choose which currencies they want to use.

#### Private currency competition as a discovery procedure

It is hardly surprising that Hayek was first among representatives of the Austrian School to elaborate systematically on the idea of a competitive monetary order. Like no other economist, he interpreted human action – both on the individual level and in the context of society at large – as a continual discovery procedure. This approach was in the spirit of Carl Menger, the founder of the Austrian School, who regarded money as a “*social construct*” that was the “*result of an unplanned societal evolution*” or “*the unintentional result of the purposeful individual efforts of members of a society*”.<sup>1</sup> Men discovered the nature of money in a wide variety of contexts in a sociocultural evolutionary process. It seemed therefore obvious to Hayek that the production of money should be left to such a discovery procedure as well, namely to competition.

<sup>1</sup> Mikl-Horke, Gertraude: *Soziologie: Historischer Kontext und soziologische Theorieentwürfe*, Oldenbourg Verlag München, 2011, p.94. [own translation]

Banks would, for instance, issue their own currencies – in any amount they wished. **While Hayek regarded money backed by gold or commodities as ideal, he explicitly allowed for the possibility of banks engaging in excessive creation of uncovered deposit money. However, he believed that this practice would fail to survive in a competitive market.** In an unhampered market, banks would find that the incentive to boost their asset base over and above the amount of savings deposited with them would be curtailed. **The preference of money users for an easy to use money with stable purchasing power would force banks to fulfill these expectations in the best possible way.** Money suppliers issuing uncovered money substitutes would eventually face an exit of customers and disappear from the market.

**Competition would – analogous to competition in nonmonetary goods and services – exert discipline. The structure of incentives would be optimal, as general welfare would increase as a result of numerous competing actors pursuing their own interests.**<sup>163</sup> Hayek famously concluded:

*“Money is the one thing competition would not make cheap, because its attractiveness rests on it preserving its ‘dearness’.”<sup>164</sup>*

**What role would a central bank play in such a competitive order? It would become obsolete.** This prospect is welcomed by Hayek, as government-

<sup>163</sup> See “The Denationalization of Money, An Analysis of the Theory and Practice of Concurrent Currencies”, Friedrich A. von Hayek, 1977, p. 57

<sup>164</sup> See “The Denationalization of Money, An Analysis of the Theory and Practice of Concurrent Currencies”, Friedrich A. von Hayek, 1977, p. 94



run monetary policy is precisely what he regards as the major source of economic instability. According to Hayek, historical economic crises were time and again attributable to the distorting effects of monetary policy implemented by governments, rather than to so-called market failures:

*“The past instability of the market economy is the consequence of the exclusion of the most important regulator of the market mechanism, money, from itself being regulated by the market process.”<sup>165</sup>*

However, the central bank would not necessarily have to stop operating right away. It could continue to issue (government) currency. However, it would be in competition with commercial banks and other private money producers and would therefore have a strong incentive to supply citizens with a stable currency.

---

<sup>165</sup> See The Denationalization of Money, An Analysis of the Theory and Practice of Concurrent Currencies”, Friedrich A. von Hayek, 1977, p. 102





**The cryptoresearch.report offers a comprehensive overview of recent developments within the crypto markets. Quarterly publication, especially for Investors.**

Further information at [www.cryptoresearch.report](http://www.cryptoresearch.report)

## Cryptocurrencies – free currency competition in practice?

*“Cryptocurrencies are a use case of competing private currencies as envisaged by Friedrich August von Hayek.”<sup>166</sup>*

Norbert F. Tofall

*“The money monopoly is perhaps the most important pillar on which the modern day’s state power rests.”*

**Thorsten Polleit**

*“It will be extremely hard for CCs to displace and compete with government-issued currencies, as dollars to euros and yuan are virtual natural monopolies in their regions and will not easily give up their seigniorage profits.”*

**JPMorgan, The Bitcoin Bible**

Initially the debate over the idea of competing private currencies was purely theoretical, as the government monopoly on money had been so deeply rooted for such a long time that the public at large never thought of seriously questioning it. **When Hayek published his proposal, the voluntary abolition of the money monopoly would have been required to adopt it, which was tantamount to governments relinquishing a great deal of their power – a highly unrealistic prospect.**<sup>167</sup>

**Since then, conditions have fundamentally changed, though, as a result of the pervasive spread of the internet.** After the near-collapse of the monetary and financial system in the 2008 financial crisis and the erosion of confidence in government currencies and central banks in its wake, the first private digital currency in the form of Bitcoin made its entrance in the realm of Web 2.0. Since then more than 1,500 cryptocurrencies (in their entirety better described as crypto assets) with a market capitalization totaling roughly USD400bn have entered the market. As cryptocurrencies are largely outside of government control – at least until now –, a kind of laboratory for private currency competition could be established. In fact, the ECB suspects (rightly) that Hayek’s theoretical work was the *spiritus rector* of today’s cryptocurrencies.<sup>168</sup>

### Decentralization: The Cryptocurrency Killer App

What makes cryptocurrencies so interesting is that they are so contrary to the mental image many people have of money.<sup>169</sup> The most famous cryptocurrency, Bitcoin, functions as a payment system based on monetary units that consist of themselves and are not redeemable for gold or any other commodity. Bitcoin is accepted as currency, though in line with the definition of Ludwig von Mises it has to be considered as pure fiat money<sup>170</sup>, that is not run by the state and is not tied to a commodity. Many monetary theorists were convinced that such a currency could not possibly emerge in a free market. Hayek himself believed that currencies tied to commodities would prevail in a system of free competition. What is the reason, then, for the growing acceptance of cryptocurrencies?

**The secret of their success that is at the core of an accepted currency is a result of their decentralized nature. Cryptocurrencies such as Bitcoin, Monero, and Litecoin are not issued by a single private**

<sup>166</sup> See “Währungsverfassungsfragen sind Freiheitsfragen: Mit Kryptowährungen zu einer marktwirtschaftlichen Geldordnung?”, Norbert F. Tofall, Flossbach von Storch Research Institute, 2018, p. 4 (Currency questions are questions of liberty: Toward a market-based monetary order with cryptocurrencies?)

<sup>167</sup> See “A praxeological analysis reveals that currency competition is simply not in the state’s interest.” (Polleit, Thorsten: “Hayek’s ‘Denationalization of Money’ – a Praxeological Reassessment”, Journal of Prices and Markets, p. 79)

<sup>168</sup> See “ECB: ‘Roots Of Bitcoin Can Be Found In The Austrian School Of Economics’”, Jon Matonis, Forbes, 2012

<sup>169</sup> The success of cryptocurrencies does not only irritate a number of laypersons. For instance, the well-versed monetary theoretician (and Austrian School representative) Guido Hülsmann stated in 2007 that a money “that is defined entirely in terms of bits and bytes is unlikely ever to be produced spontaneously on a free market.” (“The Ethics of Money Production”, Ludwig von Mises Institute, 2008, p. 33).

<sup>170</sup> See “The Theory of Money and Credit”, Ludwig von Mises, Yale University Press, 1953



**institutions; they are based on a source code protocol and maintained through a decentralized network of widely dispersed market participants.** Unlike a currency issued by a private money producer, whose paper money represents a promise to pay, Bitcoin is a fiat money that is no one's liability. In this respect, a cryptocurrency like Bitcoin is similar to gold.

An interesting aspect of the currency competition launched by the emergence of cryptocurrencies is also that it differs from Hayek's proposal in one decisive respect. The situation as envisaged by Hayek would always carry the latent risk that a – centralized – money-issuing entity could fail.

*"Money is power, and rare the heads that can withstand the possession of great power."*  
**Benjamin Disraeli**

**In the case of a cryptocurrency such as Bitcoin, no such central entity exists. The smooth operation of a cryptocurrency is safeguarded by geographically dispersed interest groups such as developers, miners, traders, users, and others working within the ecosystem. Trust and risk are distributed across a network of numerous parties pursuing their own interests.**<sup>171</sup> Those purchasing a cryptocurrency ultimately place their trust in mathematical and encryption protocols that maintain a system of incentives, which in turn provides all participating entities or groups with a motive to ensure the currency's integrity. Hence the slogan "In Code We Trust"<sup>172</sup>. To this day this system of incentives has worked splendidly, and not one of the numerous attempts to destroy it has been successful.

### The Quest for Stability

A problem plaguing many cryptocurrencies – and, as a proxy for them, Bitcoin – is their excessive price volatility. Bitcoin's inelastic supply, coupled with a demand shock triggered by the rapid diffusion of "crypto-ideology" and the associated speculative hype,<sup>173</sup> has temporarily led to an enormous increase in the purchasing power. Leaving aside the recent correction, the history of Bitcoin is a history of hyper-deflation<sup>174</sup> – and in a time of strong deflation it makes more sense to hoard a currency than to use it as a means of payment. As a result Bitcoin and other new cryptocurrencies are barely fulfilling the function of media of exchange at the moment.<sup>175</sup>

The same feature that underpins the currency's store of value function hampers its use as a unit of account. **As the supply of Bitcoin and other cryptocurrencies is as a rule limited, with no central entity able to balance excess demand by boosting supply, cryptocurrencies are occasionally highly volatile.**<sup>176</sup> Contrary to Mises' belief that an inelastic supply

<sup>171</sup> See "Trustless is a Misnomer", Nick Tomaino, Medium, 21.07.2016

<sup>172</sup> See "The Bitcoin Boom: In Code We Trust", Tim Wu, New York Times, 18 December 2017. (Coincidentally a play on words on the title of this report, which was first published well before Bitcoin was born.)

<sup>173</sup> Thus many people believe that cryptocurrencies, which are still at the beginning of more widespread adoption, will continue to gain in value in coming years and are buying them as speculative buy-and-hold investments.

<sup>174</sup> See "Bubble or Hyperdeflation", Crypto Research Report, Incrementum AG

<sup>175</sup> Several people in the crypto community argue that Bitcoin is not at all predestined to become a widely adopted medium of exchange for day-to-day use. Rather, they say, Bitcoin represents a decentralized and therefore intervention-resistant store of value. The original source code of Bitcoin, which can be altered only if the extremely disparate Bitcoin community arrives at a consensus, provides the best possible conditions for the currency's store-of-value function: The total amount of Bitcoin that can be mined is restricted to 21 million units (some of which have already been lost forever – e.g. a famous hard disk drive containing 70,000 BTC is known to be peacefully collecting rust in a UK landfill). It takes around 10 minutes for a new bitcoin to be created. Since the emergence of Bitcoin in 2008, the quantity of newly created bitcoins has been declining by half every four years. According to estimates, by 2140 all bitcoins that will ever exist will have been mined. This continually strengthening deflationary tendency strongly underpins the store-of-value function of BTC.

<sup>176</sup> Cryptocurrencies are affected to a greater extent by this volatility than, for example, gold, as gold is subject to countercyclical buffers through jewelry and fabrication demand (declining demand when prices rise and vice versa)



would go hand in hand with comparatively small fluctuations in demand and price, cryptocurrencies have not proved suitable for fulfilling unit of account functions such as drawing up corporate balance sheets – at least so far.<sup>177</sup>

In line with Hayek, one could counter that a cryptocurrency that is undergoing a process of monetization has to be regarded as an object of speculation in the early stages of the process, which will inevitably involve volatility. It seems logical that speculative demand and reservation demand will be strong at an early stage. However, the importance of speculative demand should diminish over time, as ownership of the cryptocurrency in question broadens. **If they are successful, emerging cryptocurrencies should eventually manage the transition from speculative assets to currencies that function reliably as media of exchange.**<sup>178</sup>

*“Bitcoin is the beginning of something great: a currency without a government, something necessary and imperative.”*  
Nassim Taleb

A number of cryptocurrency enthusiasts who don’t want to simply wait and see whether this will happen are working on creating cryptocurrencies with stable values, so-called “stablecoins”.<sup>179</sup> These currencies have a flexible supply, which is adjusted to fluctuations in demand with the aim of achieving purchasing power stability. **But – and here is the problem – how is it possible to guarantee “price stability” without being forced to restrict or abandon the decentralized and therefore intervention-resistant structure of a cryptocurrency?** Simply decreeing an “inflation target” from on high is precisely what central banks are doing and is contradictory to the spirit of cryptocurrencies.<sup>180</sup>

The solution to this problem may be DAO, which stands for “decentralized autonomous organization”. Members of such a DAO organize independently. With respect to managing a stable-coin, members of a DAO would be tasked with ensuring the stability of its purchasing power. Stability would be promoted through a structure of incentives embedded in the coin’s programming code. The recently launched Maker DAO project<sup>181</sup> appears to hold promise in this regard. Maker’s stablecoin, called Dai, is still very young, but has already become popular with many users.<sup>182</sup>

—  
as well as through fluctuations in the gold supply (growth in mine supply and rising sales from existing stocks when prices increase and vice versa).

<sup>177</sup> “Human Action: A Treatise in Economics”, Ludwig von Mises, Auburn, Alabama: Ludwig von Mises Institute, 1998, p.225ff

<sup>178</sup> As discussed in this section, relatively supply-inelastic gold is not immune against periodic high speculative demand, either: If in the course of an emerging currency competition currencies backed by gold were to turn out to be preferred by most users, surging demand for gold would rapidly boost its price – and presumably also its volatility – which would at least temporarily suspend suitability of the precious metal as a means of payment and unit of account. (See “The Denationalization of Money, An Analysis of the Theory and Practice of Concurrent Currencies”, Friedrich A. von Hayek, 1977, pp. 102/127.)

<sup>179</sup> See the section “Crypto: Friend or Foe?” “Crypto: Friend or Foe?”

<sup>180</sup> See “The Search for a Stable Cryptocurrency”, Vitalik Buterin, Ethereum Blog, November 11, 2014

<sup>181</sup>: “Maker for Dummies: A Plain English Explanation of the Dai Stablecoin”, Gregory DiPrisco, Medium, November 20, 2017

<sup>182</sup>: “Stablecoins: A Holy Grail in Digital Currency”, Nick Tomaino, The Control, April 3, 2017



## Conclusion

*“Humanity’s progress always involved a small minority deviating from the ideas and customs of the majority, until its example finally persuaded others to adopt its innovations as well.”*

Ludwig von Mises

*“I do not think that it is an exaggeration to say that history is largely a history of inflation, and usually of inflations engineered by governments and for the gain of governments.”*

**Friedrich August von Hayek**

In our opinion Hayek has bequeathed us a vital body of preliminary theoretical work for a future, more crisis-resistant monetary order. In order to create full freedom of choice for money producers and users, the money monopoly of the state has to be repealed and replaced by an environment in which private currencies can be developed and can compete in a decentralized discovery procedure. As money users would punish producers of unsound (i.e., inflationary) money by abandoning it, both government and private currency suppliers would be motivated to keep their seigniorage income low and to issue sound money.

As governments would no longer be able to mitigate their debt burdens through inflation, such a monetary order would be highly effective in enforcing fiscal discipline. **The chronic debt-crisis of our times, namely the overindebtedness of governments, could never emerge in such a system – thus currency competition would be the most powerful debt brake imaginable.**<sup>183</sup>

*“If politics is the art of the possible, then political philosophy is the art of making the seemingly impossible politically possible.”*

**Friedrich August von Hayek**

For a long time, such competing currencies were unthinkable, as governments have not been inclined to voluntarily abandon their monopoly on money. **With cryptocurrencies, which could emerge only due to the spread of the internet and which cannot be effectively suppressed or prohibited due to their decentralized structure, currency competition in the spirit of Hayek has become possible even in the absence of self-limitation by governments.**

<sup>183</sup> “Währungsverfassungsfragen sind Freiheitsfragen: Mit Kryptowährungen zu einer marktwirtschaftlichen Geldordnung?“, Norbert F. Tofall, Flossbach von Storch Research Institute, 2018, p. 5 (“Currency questions are questions of liberty: Toward a market-based monetary order with cryptocurrencies?”)



## Exclusive interview with Dr. Richard Zundritsch: “Hayek would prefer gold to Bitcoin”



*Friedrich August von Hayek and his nephew Richard Zundritsch in the 80s in Obergurgl*

*Dr. Richard Zundritsch studied at the University of Vienna, where he earned a doctorate in law. He is an independent financial advisor based in Switzerland who specializes in capital markets, asset management, succession planning, and venture capital. Dr. Zundritsch is Friedrich A. Hayek’s nephew and knew him personally. He is widely acknowledged as an expert on Hayek and his work.*

***Dear Dr. Zundritsch! You are the nephew of the great F.A. Hayek and are a world-renowned Hayek expert. Hayek is seen as a pioneer on the topic of currency competition. Why Hayek in particular?***

When Hayek wrote the monograph “*The Denationalization of Money*” in 1976, which was published in German one year later, competing national currencies as we know them today did not exist yet due to capital controls. It was customary that one had to obtain a permit for trading foreign currencies. Hayek therefore first of all demanded the adoption of general freedom of contract, so as to make it possible for individuals to freely choose the currencies in which they preferred to conclude contractual agreements.

***Hayek succeeded with this.***

Indeed – today this freedom of contract exists. One has to mention this at the outset if one wants to discuss Hayek’s ideas in his work on the denationalization of money. Hayek was primarily focused on currency competition and not on the abolition of state-issued money as such. He eventually regretted not having found the time to pursue the topic further.

***In short, Hayek demanded more freedom. Many Bitcoin and cryptocurrency supporters demand the same.***

That is correct. However, one of the major issues motivating Hayek was inflation. Hayek had experienced the scourge of inflation throughout his life, which is why he fervently wished for monetary stability. This desire underlies Bitcoin as well – but ironically, the value of Bitcoin and other cryptocurrencies is anything but stable.

***Would Hayek approve of the freedom-related aspects of cryptocurrencies?***

Cryptocurrencies don’t bestow quite as much freedom as people seem to think. Trading of cryptocurrencies almost always involves centralized exchanges and state-issued currencies. It may not be possible to impose regulations on Bitcoin itself, but it can be done to the interfaces on its periphery. Hayek would probably be skeptical with respect to this.



***And what about Bitcoin's volatility?***

I'm quite certain that Hayek would not appreciate it. Achieving stability of the purchasing power of money was clearly his declared goal. He attached great importance to this. He was a fiercely opposed to both inflation and deflation. In Hayek's model private currencies would have been issued by specific issuers – governments, banks, or other companies. Cryptocurrencies lack such issuing entities; instead they are based on a technology, the blockchain. While their supply is limited and it is impossible to inflate them at will, fluctuations in their value can be substantial.

***Wouldn't Hayek, as an opponent of inflation, welcome their limited supply?***

No. Hayek's idea was that currency issuers would be interested in keeping the value of their currencies stable. By contrast, cryptocurrencies have only inventors. Once a blockchain is launched, it so to speak acquires a life of its own. No one is interested in keeping a cryptocurrency under control. On the blockchain it is not possible to manage a currency's purchasing power by altering its supply, such as private money producers as envisaged by Hayek would be able to do.

***Do you believe Hayek wouldn't like cryptocurrencies at all?***

No, he would. Hayek would undoubtedly welcome the emergence of currency competition. Particularly in international payment transactions, which can sometimes can still take several days and cost an arm and a leg, cryptocurrencies are providing much-needed competition. I think, though, that rather than being a fan, Hayek would be an interested observer of cryptocurrencies. **I believe it is fair to assume that he would still prefer gold to cryptocurrencies.**



# Crypto: Friend or Foe?

*“There is going to be one cryptocurrency that will be the online equivalent of gold, and the one you’d bet on would be the biggest.”*

Peter Thiel

## Key Takeaways

- Bitcoin: As with gold, the money supply cannot be arbitrarily manipulated, which could make the cryptocurrency a good store of value.
- Cryptocurrencies are digital and therefore indispensable in the internet age. If Bitcoin proves itself, the cryptocurrency could become increasingly relevant as digital gold.
- Gold-backed cryptocurrencies could bring some stability to the crypto world and make it easier to spend gold on a daily basis.

## Crypto and Gold: Related Asset Classes?

*“Bitcoin is about the network effects. The first network effect is speculation. People have been collecting and speculating in gold and silver and sodium bicarbonate for centuries. The second network effect is going to be merchants accepting Bitcoin because people are holding it speculatively. Then merchants are going to start using it as payment themselves because they accept it.”*

Trace Mayer

Cryptocurrencies experienced a meteoric rise in 2017. Where do they come from and why are they here? Seasoned Nobel laureates expressed their skepticism about cryptocurrencies several times in the past year – probably because this new phenomenon does not fit into the mindset of the mainstream-representatives of the economics profession.

**Even among gold sympathizers, crypto proponents and critics are roughly in balance. This ambiguity is quite surprising, because Bitcoin is viewed by some as a digital alternative to gold. After all, the creation of cryptocurrencies was supposedly inspired by the yellow precious metal. Therefore, Bitcoin is often referred to as “digital gold”.**

*“30th anniversary of Black Monday, when markets dropped 23% in a day. In crypto we just call that Monday.”*

Alexander Tapscott

As we wrote in the chapter “In Bitcoin We Trust?” in our *In Gold we Trust* report 2017, Bitcoin – like gold – cannot be inflated by a central bank.<sup>184</sup> Furthermore, **neither gold nor Bitcoin is anyone else’s liability, which is why they do not harbor an immediate counterparty risk. Both offer protection against negative interest rates and the demonetization of fiat money.**<sup>185</sup>

**Bitcoin can be viewed as a fiat money in the narrower sense that imitates a commodity money.**<sup>186</sup> Like gold, bitcoins also have to be mined, but digitally. The production of new bitcoins requires substantial computational power and electrical energy, which ensures a kind of digital scarcity due to the difficulty and time lag of the mining process. Unlike gold, Bitcoin is from the outset limited to an absolute total amount that is already established today: there will never be more than 21mn bitcoins, all of which should be mined by 2140. Bitcoin is programmed to issue a certain number of new coins approximately every ten minutes. Since its creation in 2008, this amount of newly created bitcoins has decreased every four years. Today we are at 12.5 bitcoins every 10 minutes; in 2020 we will be down to 6.25; and in 2024 to 3.125.

<sup>184</sup> See “In Bitcoin We Trust”, *In Gold we Trust* report 2017, pp. 113-121

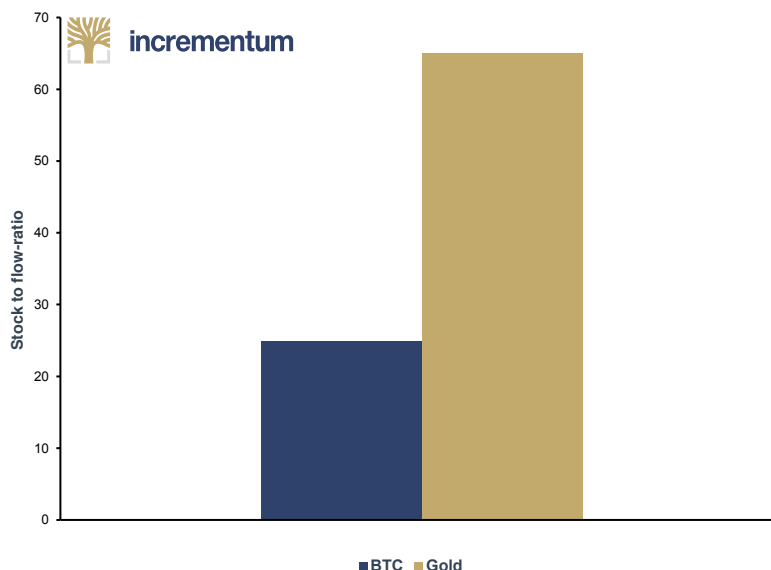
<sup>185</sup> See “In Bitcoin We Trust”, *In Gold we Trust* report 2017, pp. 113-121

<sup>186</sup> See “Theorie des Geldes und der Umlaufmittel”, Ludwig von Mises, München und Leipzig: Duncker & Humboldt, 1912, p. 46



A year ago we had already pointed out the similarity between gold and Bitcoin in terms of their respective stock-to-flow ratios (SFR). While gold has an SFR of about 64 years, Bitcoin's is about 25 years.

#### Current stock to flow-ratio: Bitcoin & Gold



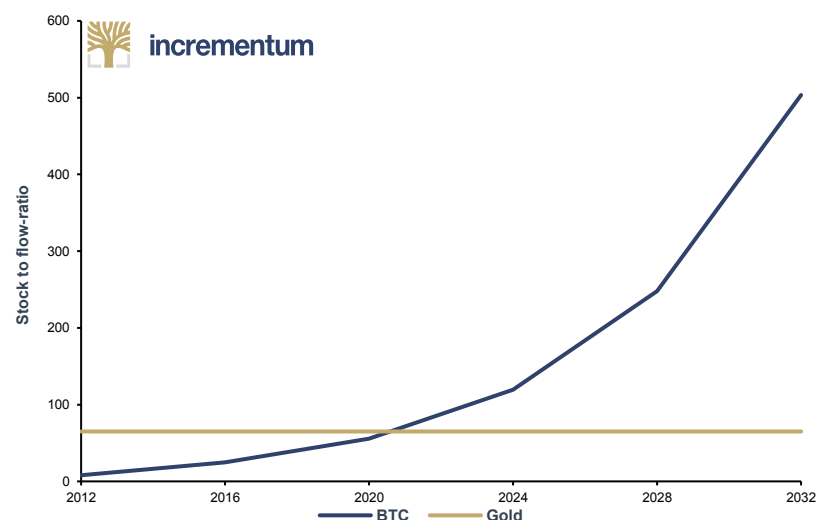
Sources: World Gold Council, bitcoinblockhalf.com, Incrementum AG

*"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**

Bitcoin's SFR will continue to increase over time as the number of newly created bitcoins halves every four years. **In 2024, the SFR will be approximately 119 years.<sup>187</sup> The SFR of Bitcoin will then be *ceteris paribus* about twice as high as that of gold.** For some, this makes Bitcoin the ultimate store of value, one that might even be superior to gold in the future.

#### Stock to flow-ratio over time: Bitcoin and Gold



Sources: World Gold Council, bitcoinblockhalf.com, Incrementum AG

<sup>187</sup> See "In Bitcoin We Trust", *In Gold we Trust* report 2017, pp. 113-121

## Bitcoin: A Challenge to Gold?

*“The world ultimately will have a single currency, the internet will have a single currency. I personally believe that it will be bitcoin.”*

Jack Dorsey

Since Bitcoin has catapulted itself into the limelight with its spectacular rally in the past year, some analysts have seen the position of gold as safe haven threatened. It is often said that Bitcoin could challenge a large part of gold’s market capitalization. However, the market capitalization of Bitcoin is still just under USD 150bn, while gold has a market capitalization of over USD 7tn.

**But there is a key reason why Bitcoin could gain some ground over gold with respect to their respective market capitalization in the future.** That is the fact that our lives are becoming increasingly digital. With the emergence of the internet and e-mails interpersonal communication has changed fundamentally. Today, direct global communication in real time, made possible by instant messengers of all kinds, has become an integral part of life. Similarly, with the emergence of Bitcoin a fundamental change is about to happen as people share value units peer-to-peer across the internet.

The Millennials in particular should play a decisive role here. Growing up as “digital natives”, they are cultivating a lifestyle very different from that of their parents – a digital one. **Just as some female Millennials of today look forward to a digital bouquet delivered via smartphone on Valentine’s Day, digital gold in the form of Bitcoin could be more real for this generation than an actual gold bracelet or ring.**

*“If you are a millennial and you are faced with hyper-expensive equities, hyper-expensive bonds and hyper-expensive real estate, your opportunity set for wealth creation over the future is troublesome. By the invention of a new asset class that has phenomenal upside and also has a use as a reserve asset, you have given millennials an opportunity for wealth creation.”*

**Raoul Pal**

The digital revolution is not leaving its mark on just the financial world. The “digital natives” of today are the financial clients of tomorrow. As Bitcoin and other cryptocurrencies threaten the very existence of banks, they have to devise new ways of thinking about how best to respond. One possibility would be to integrate the emerging asset class around Bitcoin into their business models in order to neutralize the threat of a widespread loss of customers.

Bitcoin should be of interest not only to innovative commercial banks but also to central banks themselves. Today, key central banks hold some of their assets in physical gold. This serves as a safety buffer for their national currencies. **It cannot be ruled out that central banks will be able to supplement this safety buffer with Bitcoin as a new reserve facility in the future.**<sup>188</sup> Yet to date, no central bank has hinted at doing so, but the idea seems to make sense. **Mario Draghi, president of the ECB, has though already indicated that European commercial banks could hold Bitcoin positions in the foreseeable future.**<sup>189</sup>

<sup>188</sup> See “2018: The Year Central Banks Begin Buying Cryptocurrency”, Eugene Etsebeth, Coindesk, December 17, 2017

<sup>189</sup> See “European Banks Could Soon Hold Bitcoin, Admits ECB President”, CCN, February 8, 2018





*“Blockchain is fascinating and there are all kinds of applications for it. But the ultimate killer-app is the boring old nondilutive reserve asset, which is Bitcoin.”*

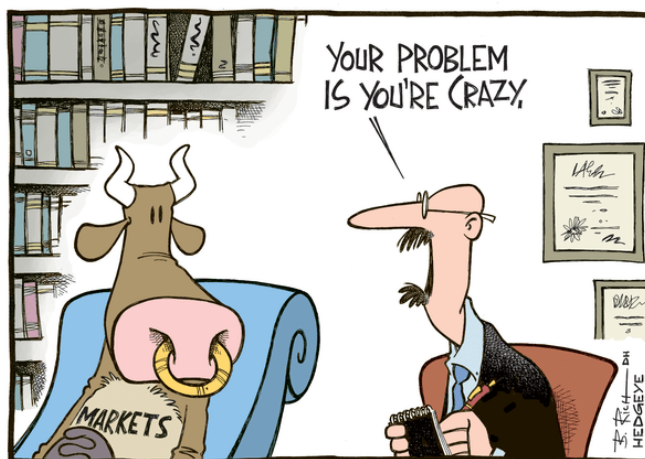
**Mark Hart**

*“Bitcoin on the other hand hasn’t even gone through one market cycle, having existed only in a period of rising risk assets, extreme monetary largesse and declining volatility.”*

**Jordan Eliseo**

Due to its decentralized set-up Bitcoin as an independent asset could undoubtedly acquire geopolitical relevance, provided it proves to be an invulnerable investment over the next few years. For a few lateral thinkers Bitcoin already seems to have this geopolitical component. They argue, why else would the hitherto hesitant US regulator suddenly approve Bitcoin futures, less than a week after the announcement by Russia, China, India, and Brazil to launch a new gold trading platform? It is commonly known that China and Russia have begun to massively increase their gold holdings in recent years and are thus working towards de-dollarization.<sup>190</sup> The lateral thinkers therefore consider it possible that the US has seen through this scheme and views Bitcoin as a new alternative in the geopolitical intrigue of global currency competition. **While US-affiliated Japan also seems well-disposed to Bitcoin, Russia and China have opposed the cryptocurrency. The Chinese government has even tried several times to crack down on Bitcoin through bans and tough regulation.**<sup>191</sup> Of course, these are hypothetical interpretations of recent events, which may seem a bit far-fetched – but such interpretations are not absurd.

In order to achieve the same monetary status as gold, Bitcoin, given its still juvenile age of 9 years, will though have to prove itself over the next few years or decades. Gold has proven its value over several thousand years and has therefore become an independent reserve asset. Critics of Bitcoin rightly point out that the cryptocurrency so far has seen only the unusual market environment that has existed since the last financial crisis. Over the past ten years – exactly coinciding with Bitcoin’s lifetime so far – central banks have created a veritable everything-bubble of assets with their ultra-expansionary monetary policy. Also the cryptocurrencies have definitely benefited from it. At the same time, they have pushed market volatility down and de facto eliminated risk pricing on the financial markets. **The question is: How will Bitcoin behave in a recession? And how will the Bitcoin price react in the wake of a crash of the financial markets?**



Courtesy of Hedgeye

<sup>190</sup> See “The De-Dollarization: Good-bye Dollar, Hello Gold?“, In *Gold we Trust* report 2017, pp. 66-90

<sup>191</sup> See “Trace Mayer: Bitcoin Can Become Reserve Asset“, Valentin Schmid, *The Epoch Times*, January 19, 2018





The best place to find **gold**  
is beside a **gold** mine...

## HEART OF THE GOLDEN TRIANGLE



[tudor-gold.com](http://tudor-gold.com)

TUD.V TSX Toronto

TUC. F Frankfurt

## Gold and Bitcoin – A Fruitful Symbiosis?

*“Unlike every previous bubble in history, bitcoin prices do not generate a supply response. Real estate bubbles cause overcapacity in real estate; government bond bubbles bring government spending and huge supplies of new government bonds. But the quantity of bitcoin increases at a steadily slowing pace. And the higher its price runs, the more it seems to validate price targets of hundreds of thousands or even millions, enticing those who own bitcoin to take them off the market.”*

Dan Oliver

*“Every year since the 1970s gold has lost market share to financial assets and I think this gives it a chance to come back against those financial assets.”*

**Peter Grosskopf**  
CEO Sprott Inc.

The future does not necessarily hold a bitter struggle for the supremacy of the ultimate independent reserve asset. **Gold and Bitcoin cannot just coexist, they can even be combined to get the best of both worlds.** There are numerous attempts to tie gold, as well as other precious metals, to a blockchain. For many investors, cryptocurrencies are a new, interesting asset class. There is just one problem: Existing cryptocurrencies such as Bitcoin are currently exposed to major market fluctuations. Many investors, especially institutional players, are deterred by the high volatility.

### Gold-Backed Cryptocurrencies

In contrast, a gold-backed cryptocurrency could provide relief. Gold is significantly less volatile than Bitcoin – not least because the yellow metal has a buffer due to the jeweleries' and recycling industry's demand for gold, which significantly reduces its volatility. In order for the crypto market to establish itself in the long term and for cryptocurrencies to be used by companies, it has to rely on so-called “stablecoins”,<sup>192</sup> cryptocurrencies such as gold-backed cryptocurrencies that are stable in price.

**In the following, we want to present the most promising combinations of gold and blockchain technology.** Quite recently, TradeWind Markets Inc., a technology provider backed by Sprott Inc., Goldcorp Inc. and IEX Group Inc. launched a new digital gold trading and settlement platform that aims to simplify and speed up trading and reduce transaction costs. The Royal Canadian Mint will provide storage for the platform, confirm that it's in possession of the physical gold that underlines it, and guarantee the option of physical delivery.<sup>193</sup>

<sup>192</sup> See “Stablecoins: designing a price-stable cryptocurrency”, Haseeb Qureshi, Hackernoon, February 19, 2018

<sup>193</sup> See: [This New Blockchain Platform Aims to Give Gold a Digital Edge](#), Bloomberg, March 26, 2018



*"Gold has always been criticized as being an inefficient product, a lazy product, a product that's hard to transact with...It's almost as though the blockchain were invented for gold. The marriage of the two, I think it's going to be incredibly powerful."*

**Peter Grosskopf**  
**CEO Sprott Inc.**

*"A number of serious people are working very rapidly to digitize gold on the blockchain; we know, because we are talking to some of them."*

**Luke Gromen**

*"... it could be as big a change to the gold markets as the development of ETF's, but with the added advantage of appealing to younger generations."*

**John Reade,**  
**World Gold Council**

**Moreover, the UK's Royal Mint and the CME Group have launched Royal Mint Gold (RMG), a new digital gold standard, as they call it.** Each RMG is supposed to be backed by one gram of gold in a vault that is to be controlled and audited by the Royal Mint.<sup>194</sup> At the same time, the CME Group is to provide the platform for the real-time trading of RMG tokens. Ultimately, the RMG tokens are to be considered electronic warehouse receipts that entitle the holder to receive a corresponding amount of physical gold. The value of an RMG token is thus closely linked to the price of gold. In contrast to traditional gold investments, this scheme should not incur any storage or management fees.<sup>195</sup> Yet anyone who buys into the RMG system has to pay a still to be fixed premium that is above the spot price of gold. This markup is a source of revenue for the creators of the RMG token.<sup>196</sup>

There is also another huge advantage to be gained from blockchain-based gold trading: There is no doubt that today the value of paper gold certificates far exceeds the value of real gold in existence. It is commonly argued that the price of gold is manipulated, as increased physical demand was merely offset by an enormous expansion of paper gold on the supply side. If a blockchain could actually ensure that every ounce of physical gold could be held only once or only by a defined number of people, this would significantly reduce the ability of market participants to produce excess paper gold. **In other words, the digitization of gold on the blockchain should theoretically enable us to limit the leverage effect of financial players in the paper gold market.**

#### **Paying in Gold Made Easy!**

However, a combination of gold and the blockchain technology should also bring another decisive advantage: The new technology will make it easier to integrate gold into today's payment systems. The precious metal will be made more easily accessible, particularly to the aforementioned Millennials. As they tend lead digital lifestyles, it is unlikely that a large number of these "digital natives" will want to acquire physical gold. However, if it can be purchased via a token, chances are that Millennials will become interested in buying gold.

Therefore gold should be tokenized, as roughly described in the example of the RMG token. Tokenization means that gold bars or gold coins are provided with a token via cryptographic encryption. The token in turn is recorded on the corresponding blockchain. The token and corresponding amount of gold can be accessed only by the holder of the private key for the token. The token and, indirectly, the gold can be traded and used as collateral or as a means of payment.

One of the most prominent examples of such an attempt to tokenize gold is the concept of DigixDAO.<sup>197</sup> This is an open source project that aims to tokenize valuable assets, such as gold, through the Ethereum blockchain. The DGX token, gives the holder of the token the right to receive one gram of gold stored in a certified safe in Singapore. The title claim is secured by a "proof of asset".<sup>198</sup>

<sup>194</sup> Royal Mint Gold website: "How RMG Works"

<sup>195</sup> Royal Mint Gold website: "FAQ"

<sup>196</sup> See "Combining Bitcoin with Gold", Lawrence White, FEE, October 29, 2017

<sup>197</sup> See DigixDAO project website

<sup>198</sup> "DigixDao—The Future of Gold & a Solid Investment", Colby Mort, Medium, September 14, 2017

*“But its mere existence is an insurance policy that will remind governments that the last object establishment could control, namely, the currency, is no longer their monopoly. This gives us, the crowd, an insurance policy against an Orwellian future.”*

**Nassim Taleb**

*“I don’t think governments will introduce these things as a general rule. So the only way I can see gold really re-emerging in the currency system - and it’s the cryptocurrencies have been fascinating for this - is through some form of market-driven reintroduction. And that’s what the cryptocurrencies offer, right?”*

**David Ferguson**

**“Gold: The Story of Man’s 6000 Year Obsession”**

Ultimately, the DGX token is intended as an issuable, digital warehouse receipt for gold, whose ownership is to be allocated through the Ethereum blockchain and thereby secured. Of course, this type of payment by transferring claims to gold, which remains in vaults and does not have to change hands physically, is nothing new. The first modern Italian banks already did this. What is new is that these claims will be actual warehouse receipts and not debt claims. In addition, a change of ownership will take place via the exchange of the corresponding token and not via named account balances in the books of the depositary.

The synthesis of gold and blockchain will also ensure that the precious metal can be spent more easily again. It is a fact that today, for most of its owners, gold serves primarily as a store of value. This seems to be the case with Bitcoin as well: Its use as a medium of exchange is limited, precisely because it is a successful store of value. Gold-backed tokens are intended to remedy this situation and to re-establish gold as a means of payment.

One of the best-known and most respected names in the precious metal community is also trying to use blockchain technology. Our dear friends at Goldmoney have launched a new platform, allowing users to buy gold that is stored in the safe of the Royal Canadian Mint. The transactions made for this purpose are recorded on a private blockchain. As a buyer you pay a fee of 0.5% and receive free storage for up to one kilogram of gold as a bonus.<sup>199</sup>

Goldmoney has also started doing business with Bitcoin and other cryptocurrencies. Since the beginning of this year, the company has been offering its users the ability to buy and store Bitcoin, Ethereum, and soon Bitcoin Cash in a readily auditable and AML-compliant<sup>200</sup> way. Goldmoney also states that the cryptocurrency holdings of customers stored in a cold storage solution<sup>201</sup> are password protected and thus safe from being used in hot wallets.<sup>202</sup>

### Transaction Fees to Be Reinvested

Another gold-backed cryptocurrency, which will also act as a means of payment, is called OneGram. This cryptocurrency was launched in Dubai and is one of the few Sharia-compliant cryptoassets. OneGram also offers its investors the possibility of becoming shareholders. It is envisaged that if more gold per share is deposited in the proposed vault, investors will benefit from this. The vault will be located in the Dubai Airport Free Zone.

Due to the following mechanism more gold will accumulate in the vault over time: In the beginning each OneGram token is backed by one gram of gold. Since each transaction with a OneGram token generates a small transaction fee that is supposed to be reinvested in gold, the amount of gold backing each and every OneGram token should increase.

<sup>199</sup> See “Goldmoney and the Royal Canadian Mint Record Gold Transactions on Blockchain”, Keith McGuinness, Cointelegraph, December 22, 2016

<sup>200</sup> Anti-Money Laundering

<sup>201</sup> This ensures that the crypto assets are kept as secure as possible. With a cold storage solution, the assets are stored in a way that is completely disconnected from the internet, which reduces the target size for potential hackers.

<sup>202</sup> See “Goldmoney Launches Ether and Bitcoin Cash Cold Storage”, Avi Mizrahi, Bitcoin News, March 1, 2018



*"I'm very, very, very excited by what cryptocurrencies offer. Not just the gold world, but the whole world economy as a result of this. Because if you see the widespread adoption of a gold-backed cryptocurrency that is, you know, that people have confidence in, then you're going to see an awful lot of change."*

**David Ferguson**

**"Gold: The Story of Man's 6000 Year Obsession"**

The above-mentioned Australian Perth Mint wants to launch another project called Ozcoin. Similar to OneGram, this Australian-American project promises to issue only a limited quantity of tokens. Each Ozcoin token will be 100% gold-backed. However, there are two important points that need to be noted: First, only one-third of the gold reserves are effectively already mined and freely available. The other two-thirds are held to some extent as a reserve by a gold mining company. In addition, the tokens will be exchanged for gold only after five years.<sup>203</sup>

### Gold for Everyone

Not all gold-backed tokens have the declared goal of functioning as a means of payment, however. For example, HelloGold, a Malaysia-based startup, wants to help people save money in gold. HelloGold tries to give access to gold to people who can otherwise access their own savings only at the local bank. It focuses on countries that have been struggling with massive exchange rate fluctuations over the past twenty years. While it is easy for wealthier people to park their savings in assets such as real estate or stocks, the poorer classes in particular have been hit hard by the exchange rate fluctuations. That's why HelloGold aims to provide an alternative in the form of HelloGold tokens. In this way, even less affluent people should be able to protect their savings through a gold-backed cryptocurrency.<sup>204</sup>

At this point we have discussed only some of the projects that seek to merge the gold and crypto worlds. There are many more initiatives that we will mention here by name only. The better-known ones are: AnthemGold, Xaurum, and Zengold.<sup>205</sup> Others include Flashmoni, GoldCrypto, Gold Bits Coin, XGold Coin, AurusGold, PureGold and Reales.<sup>206</sup>

## Conclusion

*"Finally, Bitcoin will go through hick-ups. It may fail; but then it will be easily reinvented as we now know how it works. In its present state, it may not be convenient for transactions, not good enough to buy your decaffeinated espresso macchiato at your local virtue-signaling coffee chain. It may be too volatile to be a currency, for now. But it is the first organic currency."*

Nassim Taleb

**While some still do not agree, it seems clear that the world of Bitcoin and its fellow cryptocurrencies has come to stay. Crypto assets are to some extent the trump card that the younger generations, the Millennials, have over the older generation.**

<sup>203</sup> OzGold website

<sup>204</sup> HelloGold website: [FAQ](#)

<sup>205</sup> See "Gold Backed Cryptocurrency", The Hutch Report:

<sup>206</sup> See "Gold-Backed Cryptocurrencies: Icing On An Already Tasty Cake", DollarCollapse, 1 February 2018



*“Bitcoin is an excellent idea. It fulfills the needs of the complex system, not because it is a cryptocurrency, but precisely because it has no owner, no authority that can decide on its fate. It is owned by the crowd, its users. And it has now a track record of several years, enough for it to be an animal in its own right.”*

**Nassim Taleb**

*“Gold is bitcoin without electricity.”*

**Charlie Morris**

**Does Bitcoin pose a threat to gold? Or more generally, are cryptocurrencies more of a foe than a friend?** It seems beyond question that the many crypto projects will attract additional attention in the next few years and therefore more investment capital – simply because crypto is still very small compared to traditional asset classes and therefore has a lot of upside potential. However, it also seems clear that gold will always occupy a central position within the financial system – if only because an increasingly digital world awash with cryptocurrencies will trigger counterreaction in certain people, who will therefore consciously invest only in valuables that are real to them, such as precious metals.

**But as we have tried to show in this chapter, gold and cryptocurrencies do not have to be viewed as opposites at all.** Of course, each has its advantages and disadvantages. However, they complement each other and there is no reason to play one off against the other. Like gold, Bitcoin confers confidence but it does not depend on a central entity. The basis of trust is ultimately the decentralized blockchain network itself. **Bitcoin and gold are not competitors but are rather complementary. While gold is a timeless constant, Bitcoin is currently a growing asset. Both offer opportunities.**

Merging cryptocurrencies and gold also creates another alternative to state-controlled paper currencies. Although it is unlikely that the paper currencies will become obsolete overnight, the rise of gold-backed cryptocurrencies is a development that should be followed closely. Projects like DigixDAO look promising especially, and we will be excited to see how these crypto-gold tokens evolve.

It should not be forgotten, however, that there are still many questions to be answered when it comes to gold-backed cryptocurrencies. Although the idea of a blockchain-based gold exchange is attractive, we need to keep in mind that such a structure, in the form of a stock exchange, would again create a centralized hub that actually contradicts the philosophy of cryptocurrencies.

**In addition, our research on many of the emerging gold-backed crypto projects has shown that the information available on the projects is not always clear and transparent; indeed it is often sketchy.** Also, the crypto space is by no means immune to scammers, so investors should be particularly careful. Nonetheless, such negative factors are no reason to reject the new industry altogether. The future remains extremely exciting, and it cannot be ruled out that the current developments will create sustainable and valuable structures that will advance the worlds of crypto and gold.





# Precious Metals Shares – More Than a Silver Lining?

*“Better three hours too soon than a minute too late.”*

William Shakespeare

## Key Takeaways

- Gold and silver mining shares essentially moved sideways last year amid uncommonly low volatility. Relative to their own history, to the gold price and to other asset classes, valuations of precious metals stocks are currently extremely attractive.
- “Peak gold” is a realistic prospect due to a dearth of exploration spending, but it will mainly affect M&A activities in the sector rather than the gold price.
- After suffering the worst bear market in history, the gold sector finds itself finally on a significantly stronger footing. From a contrarian, countercyclical perspective, it may well be the most interesting market sector.
- In our investment process we are currently focusing on developers and emerging producers. Moreover, the silver sector seems particularly deserving of consideration.

## Taking Stock

*“Bull markets are more fun than bear markets.”*

Bob Farrell

*“Right now, gold has been so boring and asleep that nobody cares. It’s the first time, even my schedule isn’t filled.”*

**David Harquail**  
CEO, Franco-Nevada

*“Where one thing falls, another grows. Maybe not what was there before, but something new and wonderful all the same.”*

**Bambi’s mother**

**We can only agree with Bob Farrell. The “fun factor” in the gold mining sector has really been quite limited of late.** Sentiment at industry conferences has been fatally reminiscent of the mood at funerals or birthday parties in old age nursing homes. We expect, though, that the mining sector will bring us much more joy in the future. In fact, the party may well be underway already. We will explain in this section why we expect it to be a long and lavish celebration.

**Let us begin with a brief retrospective of the events of the past several years. From 2011 to 2015 gold mining shares went through a disastrous bear market. The HUI corrected more than 80%.** A sign of life returned to the market in the first half of 2016. When our last *In Gold we Trust* report was published, the Gold Bugs Index (HUI) traded at 189 points, slightly above current levels. Despite a few intermittent rallies, the past year was rather uneventful amid extremely low volatility – for mining stocks, that is.

From a technical perspective, the market has appeared to be in a consolidation phase since mid-2016. The HUI has found firm support at 170 points, which is precisely the 61.8% Fibonacci retracement level of the H1 2016 rally and has successfully survived five tests. In Elliott wave terms, one would probably refer to this phase as a corrective second wave, which could soon be followed by an impulsive third wave to the upside. Wave 3 is often referred to as the “recognition wave”<sup>207</sup> and is in most cases the longest and strongest of the five waves that together constitute the primary wave of one higher degree.

<sup>207</sup> The term *recognition wave* indicates that this is the wave in which the majority of market participants finally realize that the primary trend has changed.



## HUI-Index & Wave Counts



Sources: Acting-man.com

If one looks at the gold mining shares in relation to the broad stock market, it becomes evident that the gold sector has been subject to profound skepticism since 2011. The XAU/SPX ratio currently stands at the same level it inhabited in 2001, when gold was trading at USD 300 and the last great bull market in gold stocks began.

## XAU/S&P 500 ratio



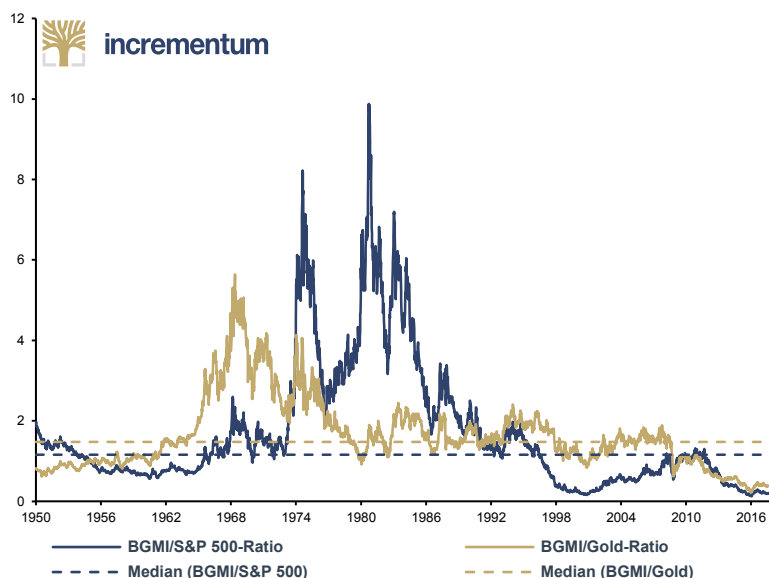
Sources: Bloomberg, Incrementum AG

**The enormity of the sector's underperformance becomes particularly obvious in a long-term comparison.** The oldest existing index of gold stocks, the Barron's Gold Mining Index (BGMI),<sup>208</sup> at present effectively trades at the lowest level relative to gold in 78 years. Relative to the broad stock market, gold

<sup>208</sup> The BGMI index currently includes inter alia Barrick Gold, Goldcorp, and Freeport Mc-Moran as well as Kinross Gold. Index data can be purchased at our friends at [www.sharelynx.com](http://www.sharelynx.com)

stocks also trade at an extremely favorable long-term level. As noted above, the last time this ratio stood at a comparably low level was in the early 2000s.

### BGMI/S&P 500 ratio and BGMI/gold ratio



Sources: Federal Reserve St. Louis, Nowandfutures, Robert Shiller, Incrementum AG

There appears to be no end to the decline in interest in the gold sector. Google searches about the gold mining sector are currently at levels comparable to those seen at the lows of 2009 or at the end of 2015. The mining sector definitely deserves to be called an extreme contrarian investment opportunity at this point.

### Google searches for “gold mining stocks” and the trend in the HUI Index



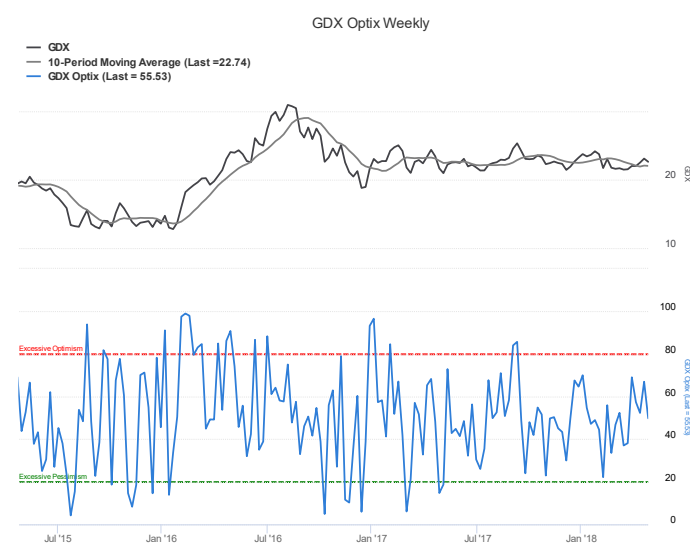
Sources: Google Trends, Incrementum AG

**One of our favorite sentiment indicators is the Optix Index published by Sentimentrader.<sup>209</sup>** It amalgamates the most prominent sentiment surveys with positioning data from the futures and options markets. Similar to most other sentiment indicators, it works as a contrarian indicator, i.e., high levels of optimism are considered bearish and vice versa. The chart shows that sentiment

<sup>209</sup> [www.sentimenTrader.com](http://www.sentimenTrader.com)

on gold stocks is currently in neutral territory, which is not particularly surprising in view of the uninspiring trading range of recent months.

### GDX Optix



Sources: sentimentrader.com

Precious metals stocks represent a noteworthy trend confirmation indicator for the gold price. **Our hypothesis is: Gold bull markets always have to be confirmed by gold mining stocks. If one analyzes the dynamics within the gold mining sector, it appears as though risk appetite is slowly coming back.** As an example, since mid-2017 the relative strength of the GDXJ ETF vs. GDX has increased moderately.<sup>210</sup> By contrast, if one compares silver mining stocks<sup>211</sup> to GDX, there is little momentum discernible so far. **We would regard strong outperformance of silver mining stocks relative to the gold mining index as a reliable trend confirmation indicator.**

<sup>210</sup> The GDX ETF includes primarily big-cap gold mining stocks, while GDXJ contains more risky junior and small-cap gold mining stocks and has a considerably larger beta. An increase in the ratio is a sign of growing relative strength of the junior mining stocks, which in turn signals rising risk appetite on the part of investors.

<sup>211</sup> Global X Silver Miners ETF (SIL)





SIL/GDX ratio and GDXJ/GDX ratio (lhs) vs. gold price (rhs)



Sources: Bloomberg, Federal Reserve St. Louis, Incrementum AG

**As a preliminary summary we can state that gold mining shares exhibit extremely favorable valuations relative to the stock market and gold as well as their own history, while investor interest is at the same time very muted.** The sector seems to be as unloved as a root canal treatment without anesthesia. From a contrarian perspective all of this actually augurs well. Having taken stock of the current situation, we want to discuss the concept of “peak gold” and what it means for the sector.

## “Peak Gold”: Trigger of an M&A Boom?

*“If you look back to the 70s, 80s and 90s, in every of those decades the industry found at least one 50+ million ounce gold deposit, at least ten 30+ million ounce deposits and countless 5 to 10 million ounce deposits. But if you look at the last 15 years, we found no 50 million ounce deposit, no 30 million ounce deposit and only very few 15 million ounce deposits. So where are those great big deposits we found in the past? How are they going to be replaced? We don’t know.”*

Pierre Lassonde

**In an interview well worth reading, mining legend Pierre Lassonde warns that the decline in exploration spending in recent years will come back to haunt the industry. He believes peak production may have been reached already.**<sup>212</sup> Lassonde criticizes what he perceives to be a lack of innovation as well as the fact that new technologies are all too rarely applied to exploration and production. Mark Bristow, CEO of Randgold, also expects peak production to be reached in coming years. He bases his view on the fact that too

<sup>212</sup> “We Don’t Know How to Replace the Great Big Gold Deposits From the Past”, Interview with Pierre Lassonde, Finanz und Wirtschaft, October 13, 2017



few new deposits are being developed and that investment in exploration remains insufficient to replace reserves. BMO expects “peak gold” to be reached by 2019 and believes that gold production could slump from the current level of 3,300 tons per year to a mere 2,000 tons by 2025.<sup>213</sup>

**This is sufficient reason for us to closely examine the subject of “peak gold”.** The much-cited and heavily disputed term denotes the attainment of a global peak in production. US geologist M. King Hubbert came up with the “peak” theory in the 1950s, positing that the rate of production of a finite resource (in his case, crude oil) follows an almost symmetrical bell-shaped curve. While growth initially increases slowly, it eventually transitions toward exponential growth and reaches a peak, which is followed by a rapid decline.

*“Now that we’re looking deeper and deeper into the earth, it’s getting much more complex to find, much more complex to recover, metallurgy, and now we have to deal with issues to do with social situations, environmental situations. So the cost of finding these things has just gone up exponentially. And the difficulty is of finding a new deposit as well.”*

**Brent Cook**

**“Gold: The Story of Man’s 6000 Year Obsession”**

Numerous examples provide evidence for an imminent production peak, for instance the situation in South Africa, which was the world’s largest producer for more than a century. Altogether South Africa has produced more than 50,000 tons of gold. Since the 1970s annual production has declined by 83%, and last year it amounted to just 145 tons.

In a thesis well worth reading in its entirety,<sup>214</sup> Juergen Mueller applies Hubbert’s insights on the modeling of oil production to gold production. He shows that the production curve of individual mines does approach a bell-shaped curve. Not only have ore grades decreased for several decades, but the required waste stripping has risen sharply as well. Ore dilution increases and there is an ever more fine-grained distribution of gold in the ore, which results in gold production requiring ever larger energy inputs.

**We are generally quite reluctant to jump on the “peak panic”**

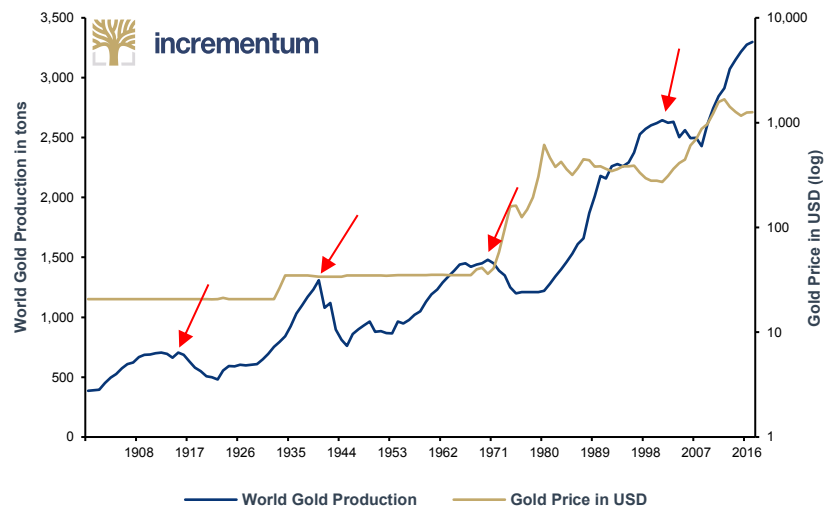
**bandwagon.** Global gold production had already reached intermittent peaks four times since 1900: in 1912, 1940, 1971 and 2001, and every peak was higher than the one preceding it. The last peak of note occurred in 2001, when annual production reached 2,600 tons, then declined for several years thereafter. Driven by a surge in gold prices, production began to rise again from 2009 onward and has increased every year since then. According to the World Gold Council, global production reached 3,298 tons in 2017.

<sup>213</sup> “Gold Miners Are Running Out of Metal”, Bloomberg, December 2016

<sup>214</sup> “Modellierung der globalen Goldproduktion durch Anwendung der Hubbert’schen Peak-Oil Methodik” (*Modeling global gold production through application of Hubbert’s peak oil methodology*), dissertation at the University of Wuerzburg, 2012. Released in book form by BoD Verlag Norderstedt, 2012.



### Annual gold production since 1900 (in tons) vs. the gold price (rhs, log scale)



Sources: USGS, World Gold Council, Incrementum AG

## Excursion: Neo-Malthusians vs. Cornucopians

*“No matter how closely it is defined, the physical quantity of a resource in the earth is not fully known at any time, because resources are sought and found only as they are needed. Even if the quantities of a particular resource were exactly known, such measurements would not be meaningful, because humans have a near-limitless capacity for developing additional ways to meet our needs.”*

Julian Simon, *The Ultimate Resource*

*“It’s unpriced optionality then because there’s going to be an M&A wave at some point. There has to be because the largest companies have been spritzing reserves hand over fist and will have to come to the market “*

**Ned Naylor-Leyland**

**“Gold: The Story of Man’s 6000 Year Obsession”**

**Julian Simon is one of the most famous representatives of the “Cornucopians” and has been extremely critical of traditional Malthusian scenarios and the assorted “peak” prophets associated with them.** According to the (Neo-) Malthusians, a global collapse is unavoidable due to the finiteness of natural resources, unless the prevailing growth trends of both the global population and the global economy are halted by political intervention. According to the Malthusians, population growth leads to overconsumption of commodities, which will invariably lead to a devastating collapse.<sup>215</sup>

But according to “Simon’s axiom”, the global standard of living and life expectancy have increased in recent decades not *despite* but *because* of population growth. **Short-term problems will create alarming pressures, which in turn lead to solutions through innovation,** says Simon.<sup>216</sup>

<sup>215</sup> Wrong for 220 years and counting! Malthus published “An Essay on the Principle of Population” in 1798

<sup>216</sup> Simon is also correct from the perspective of Hayek’s and Polyani’s theory of the distribution of knowledge in society: The more people are alive, the more likely it is that market-based improvements will come about and will be integrated in wider human cooperation. Simply put: The more minds there are that can think about solving a problem,

Simon argues that in the wake of a developing shortage in a commodity and the associated price increases, new and better commodities are successfully tapped every time. He points to the shortage of firewood in the 16<sup>th</sup> century, the shortage of coal in the 19<sup>th</sup> century, and that of oil in present times.<sup>217</sup> All these crises led to the discovery of new technologies, which either resulted in the adoption of new energy sources or in the adoption of more efficient production methods.<sup>218</sup> Resources only become valuable due to the human spirit of inventiveness. Thus the vast amount of crude oil underneath the Arabian Peninsula was worthless for the ancient Egyptians, as they lacked the technology to make use of it. Oil became a valuable resource only after the invention of the combustion engine.

**Simon notes that the idea of ever worsening shortages of resources blithely ignores the fact that, adjusted for inflation, commodity prices have been in a steady long-term downtrend.** In his excellent book *The Ultimate Resource* Simon explains why it is possible that natural resources are always available at similar prices over the long term. He studied the price trends in commodities over long periods of time and came to the conclusion that, adjusted for inflation, they barely increase and for the most part actually decline.

*“The mining industry has been a hard industry to operate in for the last 30 years. And the aura of respect surrounding mining is somewhere below that surrounding garbage collection. And the consequence of that is that many competent people would choose a job in any career other than mining.”*

**Rick Rule**

**“Gold: The Story of Man’s 6000 Year Obsession”**

**His thesis became famous due to the “Simon-Ehrlich bet”.** Simon made a public bet with Paul Ehrlich, an entomologist who had become widely known on account of his particularly drastic forecasts of impending famines and shortages, that inflation-adjusted commodity prices would decline over the following 10 years.<sup>219</sup> Simon won the bet. The bet is symptomatic of the diverging views and fierce debates between Malthusians and Cornucopians, environmentalists and economists, those prone to extrapolating trends and countercyclical contrarians, as well as futurologists and historians.

**What does this debate imply for “peak gold”? The next chart illustrates the dilemma that the gold industry faces.**<sup>220</sup> Even in the boom years until 2014, when exploration spending was expanded dramatically, almost no new deposits worthy of note were discovered. Thereafter the bust commenced, which led to drastic cuts in exploration budgets. This does suggest to us that we are probably close to another *intermittent* peak in gold production.

the more likely it will be solved. This is not least due to the fact that the greatest problems are multifaceted and require solutions on several levels. If you think about it, a society of 100,000 people would probably have a far smaller stock of knowledge to draw from than we have. Not only could it not even afford to, e.g., build a large Hadron collider, it would probably not even think about doing so.

<sup>217</sup> William Stanley Jevons was worrying about “peak coal” in the 1860s. What caused this outbreak of Malthusian concern on his part was probably the fact that the world was running out of whale oil around this time as well. Whale oil was of course quickly replaced by kerosene – no one had to sit in the dark, after all.

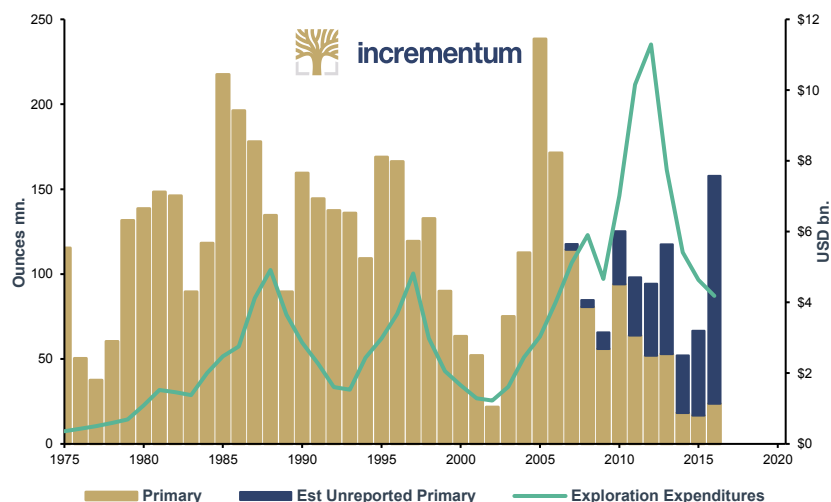
<sup>218</sup> “All will be well, Julian Simon and the pessimists”, NZZ Folio, 1995

<sup>219</sup> See “Simon-Ehrlich bet”, Wikipedia

<sup>220</sup> “Estimated unreported discoveries” refers to the inherent time lag between discovery and publication of a new deposit. Large, diversified mining companies in particular are holding back on releasing such updates, while juniors naturally tend to publish more quickly. As a rule it takes three to five years from the date of discovery until an initial resource estimate is published. <http://www.minexconsulting.com/> – on pp. 38 to 43 Richard Schodde explains this time lag.



### Primary ounces discovered (mn of oz.) and exploration spending since 1975



Sources: Schodde, RC, "Long-term trends in global exploration – are we finding enough metal?", keynote presentation for the Fennoscandian Exploration and Mining (FEM) Conference, Levi, Finland, October 2017, Incrementum AG

*"The boom in exchange-traded funds has changed the capital markets in a huge way: Companies that are part of an ETF get treated like chosen sons. But when you're not in an ETF you're getting marginalized. You become an orphan, and the junior companies in particular have been completely orphaned."*

**Pierre Lassonde**

**Another important reason for the sluggishness in exploration success has been the increase in passive investment in the sector due to the boom in mining ETFs.** To illustrate the effect, in 2007 daily trading volume of all mining ETFs stood at USD 790mn per day; by 2016 it had increased to USD 2.4bn per day.<sup>221</sup> Nolan Watson, the CEO of royalty and streaming company Sandstorm Gold, points out that around 30% of his company's shares were held by passive investors last year, while in 2014 not even a single passive investor had a stake in Sandstorm.<sup>222</sup>

**The significant increase in passive investors has important consequences for the entire industry.** In the past, capital was raised with the aid of numerous underwriters in the banking and brokerage industries. Nowadays capital increases are increasingly hampered by capital being invested passively and the retreat of banks and brokers from underwriting. This leads to funding problems for juniors in particular; and alas, juniors are especially important for the discovery of new ore deposits. In the past 20 years, 70% of all discoveries of new deposits were made by junior firms. The winners in this state of affairs are in our opinion primarily "royalty and streaming" companies,<sup>223</sup> which have seen their importance and market capitalizations increase substantially in recent years.

### Conclusion

**In coming years a price will have to be paid for neglecting exploration spending. In 2017, gold production declined year-on-year at five of the ten largest global producers.** The steady deterioration in production profiles is likely to continue. It is estimated that seven of the ten largest producers will report year-on-year declines in production in 2018. The largest decline so far has been

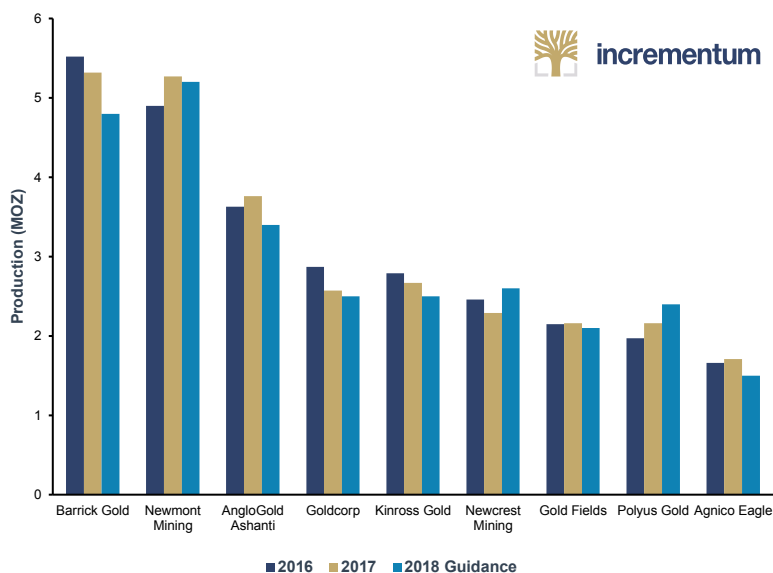
<sup>221</sup> "Precious Metals & Minerals Weekly Valuation Table, Chart of the Week: Growing influence of passive investment vehicles on trading dynamics", RBC Capital Markets, May 1, 2018

<sup>222</sup> The entire presentation about the changes to exploration and mine financing is highly recommended: <https://www.youtube.com/>

<sup>223</sup> "Royalty and Streaming" companies don't own mines, but rather purchase rights to receiving a share of future gold and silver production from mines they fund.

reported by Barrick Gold, as a result of which Newmont Mining appears set to supersede it this year as the largest global producer.

#### Gold production at the largest producers (in mn of oz.): 2016, 2017 and 2018e

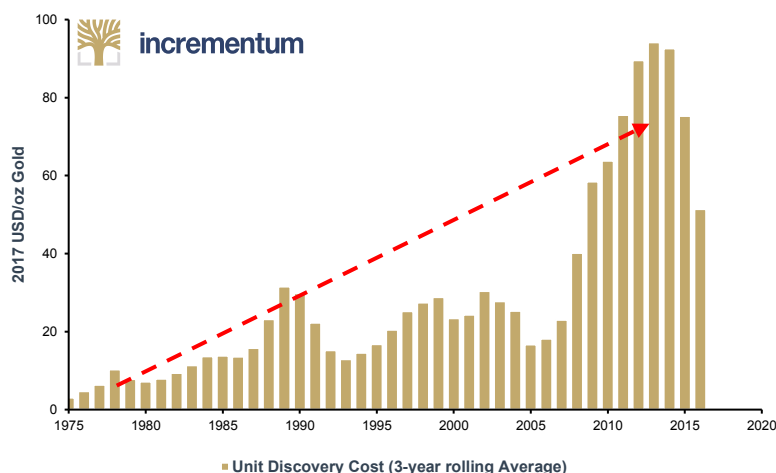


Sources: Company reports, Mining.com, Mining Intelligence, Incrementum AG

**We believe the conclusions of Julian Simon are applicable to the gold sector over the medium to long term. We regard the fear-mongering over “peak gold” as somewhat exaggerated. We see primarily the following trends:**

- An intermittent peak in gold production currently appears to be likely.
- Analogous to what happened in the oil sector, strong progress in innovation in the sector is urgently needed, particularly in making exploration more efficient.
- Spending on greenfield exploration should be increased substantially. Realistically this will only happen once a much higher gold price is obtained.
- The cost of discoveries is set to rise in the long term. Richard Schodde of MinEX Consulting estimates an increase in discovery costs of USD 10/oz. per decade.

### Unit discovery cost 1975-2016



Sources: Schodde, RC, "Long-term trends in global exploration – are we finding enough metal?", keynote presentation for the Fennoscandian Exploration and Mining (FEM) Conference, Levi, Finland, October 2017, Incrementum AG

However, we do not regard “peak gold” to represent a viable argument for higher gold prices, as the extremely high stock-to-flows ratio of the metal ensure that production declines are compensated for by the large existing stock of bullion.

**Nevertheless, “peak gold” does affect the gold mining industry, because it should be expected that the pressure to pursue mergers and acquisitions will increase significantly.**

*“It’s time to get back out in the field and start drilling!”*

**Richard Schodde**

Alas, so far, the pressure to make acquisitions does not appear to have been overly strong. The sometimes downright absurd takeovers undertaken during the boom years and the impairment charges that had to be recognized subsequently in the bust years are presumably still greatly troubling to many CEOs and investors. Thus the volume of acquisitions fell by 35% last year to just USD 8.95bn, the lowest level in 12 years.<sup>224</sup> **For comparison, consider that the total volume of M&A transactions reached USD 38.7bn in 2011.**

**We expect mergers and acquisitions to accelerate noticeably in coming years.** Producers will be forced to replenish their shrinking reserves by takeovers and mergers, particularly targeting exploration and development companies active in politically stable regions. Recent takeovers such as those of Richmond Mines by Alamos Gold, Klondex by Hecla Mining, Brio Gold by Leagold, and Lundin Gold by Newcrest appear to confirm this assumption.

<sup>224</sup> “Disastrous Deals Sideline Gold-Mining M&A as Metal Rises”, Bloomberg, January 17, 2018

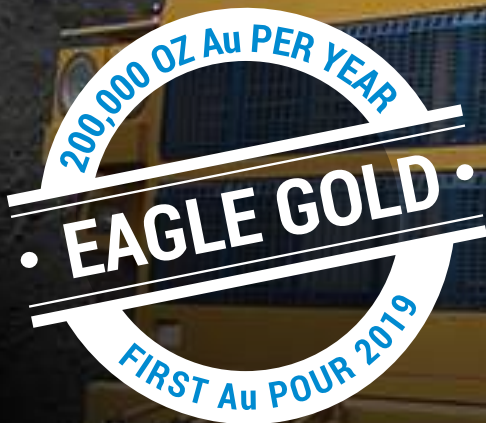


TSX.V VIT | VITGOLDCORP.COM



# Victoria

GOLD CORP



**FROM A RICH HISTORY  
A PROMISING FUTURE  
BUILDING CANADA'S NEXT GOLD MINE**

## Gold Mining Stocks in a Broad-Based Equity Bear Market

*“John Paulson has shut down his gold (and credit) fund, so it would be perfectly in keeping with the perversity of markets to have that outcome mark an important low in the price of gold. It doesn’t matter that this news involves gold and Paulson. It could be any market and any big player. I just point it out for the educational value of the potential irony.”*

Bill Fleckenstein

As attentive readers of our gold studies know, we always differentiate between “gold for insurance” (physical gold) and “gold for profit” (stocks, mining funds, etc.). We never tire of emphasizing the inherent equity-related risk that invariably attends investment in mining stocks. So the question arises, what might happen to precious metals mining stocks if the broad stock market were to suffer a severe slump?

*“The biggest misconception about gold is that it’s no longer money. The idea that a bureaucrat, a president, could say in 1971 that gold’s not money and therefore it isn’t. After 4,000 years, that the bureaucrats control money, is an absurdity to anyone who studied history and understands economics.”*

**Daniel J. Oliver**

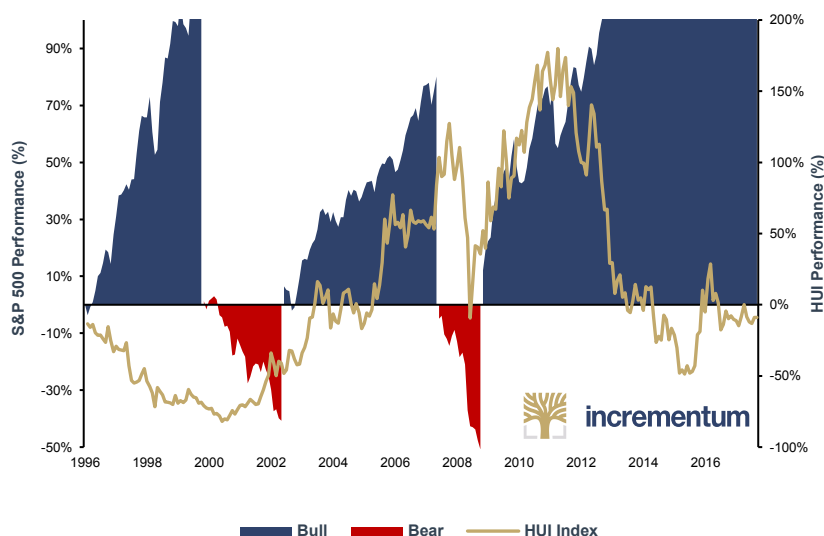
**“Gold: The Story of Man’s 6000 Year Obsession”**

In order to shed light on the issue, let’s take a look at a past example: After reaching an all-time high in March of 2008 (capping an 1,100% rally), the gold mining index HUI collapsed by 67% between July and the end of October, while the gold price fell by a comparatively mild 26% over the same time period. However, mining stocks were also the first market sector to recover after the crash, rapidly expanding in terms of relative strength. Gold mining shares bottomed a full six months before the S&P 500 Index.

The current situation is fundamentally different, though. The bear market in the HUI from September 2011 to January 2016 was the longest and most brutal bear market in the sector’s history. **Hence we expect that a slump in the stock market would lead only initially to some weakness in gold mining shares, weakness that should be far less dramatic in extent than in 2008. This should be followed by a relatively swift decoupling.**



### Bull and bear market periods in the S&P 500 Index vs. the performance of the HUI Index



Sources: Bloomberg, Palisade Research, Robert Shiller, Incrementum AG

*“The great financial success stories are people who had cash to buy at the bottom.”*

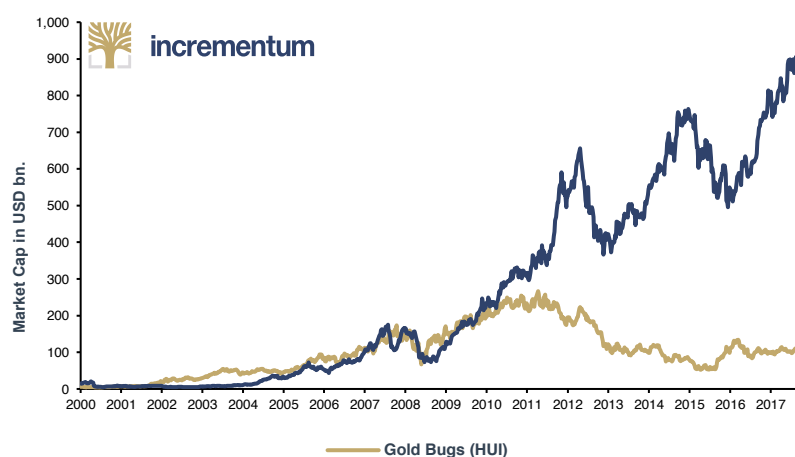
**Russell Napier**

**A glance at the market capitalization of gold mining shares reveals a substantial discrepancy in valuations relative to other asset classes, which was not evident to a remotely comparable extent in 2008.**

Currently the total market capitalization of the constituents of the HUI Index – which includes the 16 largest unhedged precious metals producers – amounts to a mere USD 107bn. This is equivalent to 0.37% of the total market capitalization of the constituents of the S&P 500 Index. The valuation of Apple alone currently amounts to more than eight times the total market cap of all 16 HUI constituents.

**Another interesting tidbit regarding gold mining stocks: With its current cash reserve of USD 285bn, Apple could in theory either buy the entire Gold Bugs Index almost three times over or, alternatively, buy 6,750 tons of gold.** Continuing with this thought experiment, if the latter were to happen, Apple would become the world’s second-largest gold holder after the US Treasury.

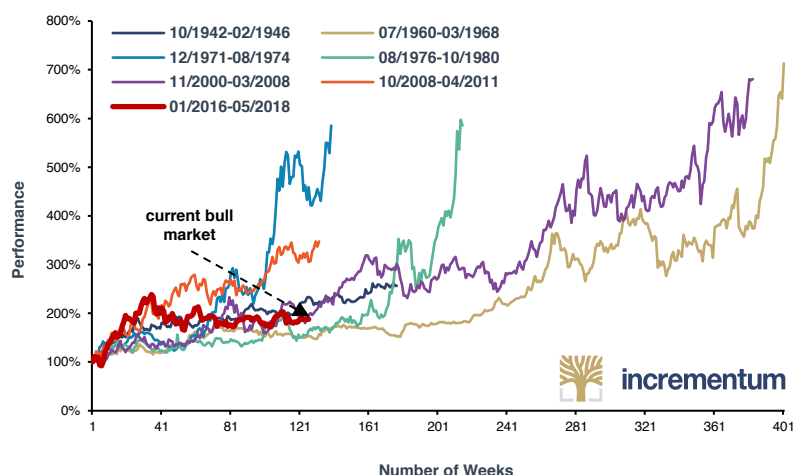
### Market capitalization of the Gold Bugs Index (HUI) vs. Apple in USD bn



Sources: Bloomberg, Incrementum AG

**Let's now take a look at one of the most popular charts from our last Gold Report.** The chart shows all bull markets in the Barron's Gold Mining Index (BGMI)<sup>225</sup> since 1942. One can see that the current uptrend is still relatively short and weak compared to its predecessors. Should we actually be at the beginning of a pronounced uptrend in precious metals stocks – which we assume to be the case – there remains plenty of upside potential. Moreover, the chart shows that every bull market in the sector ended in a parabolic upward spike, which lasted nine months on average and resulted in prices doubling at a minimum.

#### Bull markets compared: BGMI bull markets since 1942



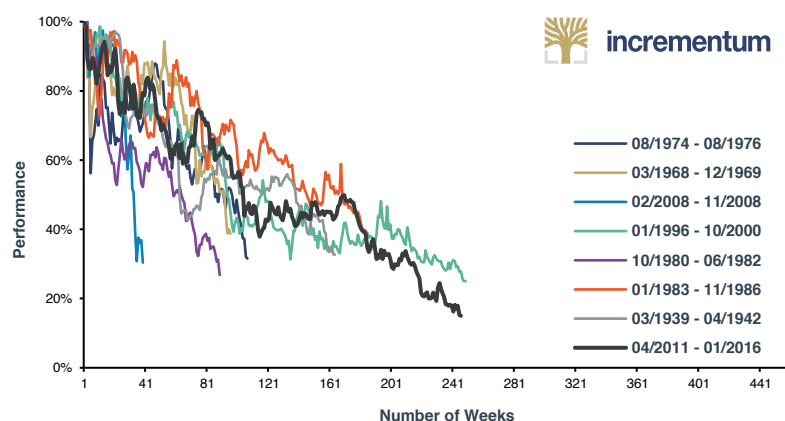
Sources: Nowandfutures, TheDailyGold.com, Barrons, Incrementum AG

*“A speculator is a man who observes the future, and acts before it occurs.”*

**Bernard Baruch**

**The next chart shows that the severity of the preceding bear market was historically unique.**<sup>226</sup> A basic premise of technical analysis is that a bull market is often the mirror image of the preceding bear market (and vice versa). Based on this, the next bull market should definitely be characterized by well above-average performance.

#### Bear markets compared: BGMI bear markets since 1942



Sources: Nowandfutures, TheDailyGold.com, Barrons, Incrementum AG

<sup>225</sup> The oldest gold mining index available. Index data can be obtained at [www.bmgi.us](http://www.bmgi.us)

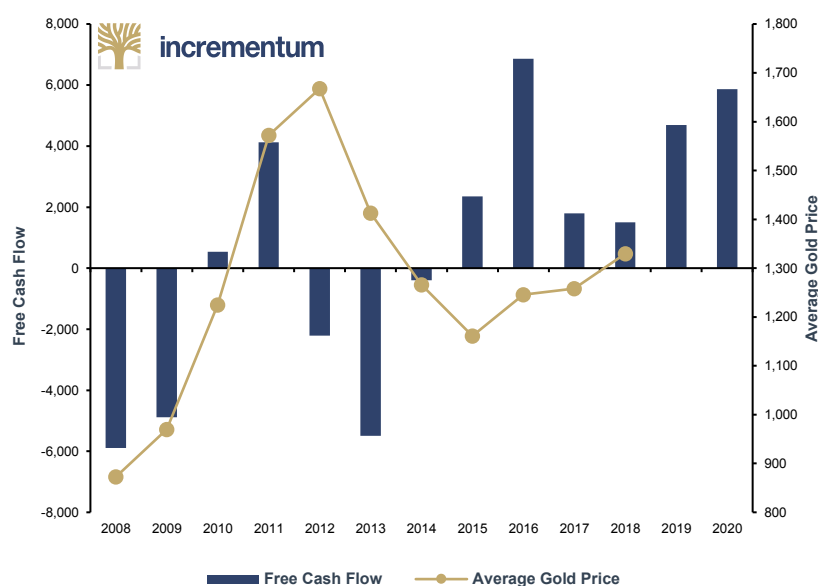
<sup>226</sup> “The Bearish Bull”, Jordan Roy-Byrne, TheDailyGold.com

*“Life’s not about how hard of a hit you can give... it’s about how many you can take, and still keep moving forward.”*

**Rocky Balboa**

With respect to operating results, a strongly positive trend is now in evidence. The industry has learned how to survive and even thrive at lower gold prices. In 2012 and 2013 the constituent companies of the HUI Index still reported large negative free cash flows. The earnings picture has brightened considerably since then. The analyst consensus is calling for record-high free cash flows of USD 4.6bn in 2019 and 5.8bn in 2020. **In other words, the constituent companies of the HUI will – ceteris paribus – earn significantly more in the coming two years than they did with the gold price at USD 1,900 and the HUI Index at more than 600.**

**Free cash flows Gold Bugs Index (in USD mn) and the average gold price**



Sources: Bloomberg, Incrementum AG

**Despite our confidence in the prospects of the gold mining sector, there are a number of caveats we must keep in mind:**

- Gold producers managed to lower production costs markedly in recent years through comprehensive cost-cutting measures. The decline in energy prices was undoubtedly helpful as well, as energy traditionally represents a very large proportion of variable production costs. The recent uptrend in oil prices should therefore slowly but surely begin to affect production costs and profitability.
- While return on equity has recently improved, it remains significantly below the level achieved in 2011 (10%).

Although debt has been reduced in recent years, the components of the Amex Gold Bugs Index remain highly indebted overall, with their aggregate debt level amounting to USD 15bn. At the 2014 peak their debt totaled USD 28bn, though, so considerable progress has been made.

## Conclusion

*“No, I don’t own Bubble FANG. I own Golden FANG (Franco-Nevada, Agnico-Eagle, New Gold and Goldcorp) – the ones that are so hated, under-owned, underpriced, and are in the early stages of a new bull market.”*

Fred Hickey

*“Everything is going to be fine in the end. If it’s not fine it’s not the end.”*

Oscar Wilde

*“Currently, the redeployment of a portion of general U.S. equity exposure to gold shares represents a non-consensus portfolio allocation with highly compelling logic.”*

Trey Reik

**We continue to be firmly convinced that the four-year-long bear market has succeeded in putting the majority of gold mining companies on far sounder footing than before.** Producers are now leaner, have reduced their enormous debt burdens, and are set to benefit significantly from rising gold prices in the future.

Moreover, our confidence is bolstered by the fact that there are very few market sectors at this time that the broad investment community is underweighting as much as the gold mining sector. This is made obvious by the fact that precious metals stocks are veritable midgets in terms of market capitalization. Based on this we expect that the mining companies – and their long-suffering shareholders – will reap a rich harvest in coming years after the long dry spell they have had to endure. **It is of great importance that the industry fulfills the promises made in recent years and regain the trust of investors.**

**It currently appears as though numerous companies are slowly transitioning toward more aggressive business strategies and are, so to speak, shifting from a bear-market to a bull-market *modus operandi*.**

Bear market – survival mode	Bull market – growth mode
Cost cutting, staff reductions – lower exploration budgets – dividend payments suspended – strengthening of balance sheets	Focus on production growth, often through (too-expensive) acquisitions, rising exploration expenditures
Review of asset portfolios – write-downs, development projects shelved, non-core projects are sold	No or little return on capital for shareholders
Funding becomes more expensive	Funding at favorable terms through banks and/or the capital markets
Highest-quality companies lead the turnaround	

Sources: Randgold Company presentation, Incrementum AG

**In this context we want to once again point to the strategy of placing companies into three categories, namely *fragile*, *stable* and *antifragile*.** Although Nassim Taleb coined the term *antifragile* back in 2012, it has so far barely penetrated into investment practice.<sup>227</sup>

- **Fragile companies:** Potential for gains in an upswing is small; potential damage in a downswing is enormous. Weak financial standing, dependent on a high gold price and possessing only a handful of assets. Political risk high.

<sup>227</sup> Further information is available under the following links: [Part 1](#) and [Part 2](#)



*“Every champion was once a contender who refused to give up.”*

**Rocky Balboa**

*“Ever tried. Ever failed. No matter. Try again. Fail again. Fail better.”*

**Samuel Beckett**

- **Stable companies:** Weak but stable earnings in stable to low gold price environment, average production growth, balance sheets fairly strong, middling political risk, unspectacular gains in an upswing.
- **Antifragile companies:** Large gains from successful undertakings, little damage from failures, solid funding, high productivity and efficiency, often leaders in the application of new technologies. May be able to increase market share in downturns by purchasing assets at favorable prices.

Is the concept of antifragility useful in practice? In our opinion the answer is yes. In the precious metals space it has in particular been successfully implemented by companies in the “royalty and streaming” subsector,<sup>228</sup> which led to a surge in the market capitalization of such companies and numerous new companies entering the market segment.<sup>229</sup> The growth of these companies benefited from change and creative destruction in the gold mining sector. Moreover, numerous producers and developers that had to be classified as fragile in the past, have done their homework and now deserve to be classified as antifragile companies.

**For contrarian investors with an investment horizon of several years, the precious metals sector currently represents an attractive niche with excellent risk-reward characteristics.** The focus should remain on conservative companies that eschew “growth at any price” strategies in favor of acting in the interests of shareholders. **In our investment process we continue to focus on developers and emerging producers.** Based on the premise that gold has reentered a bull market, we expect the gold-silver ratio to decline over the medium term. **This suggests that silver mining stocks are likely to offer particularly enticing investment opportunities.**

<sup>228</sup> As an example of an antifragile company, we would point to Franco Nevada. Franco is characterized by excellent balance sheet metrics – it has no debt, high working capital, low fixed costs, and no additional investment costs after an initial investment is undertaken. The antifragility of the company is nicely illustrated by its agreement with Glencore/Antapaccay. When Glencore ran into problems due to low commodity prices and its high debt levels in 2015, Franco Nevada was able to support Glencore to the advantage of both companies.

<sup>229</sup> See “Mining Shares”, *In Gold we Trust* report 2017, pp. 135-143



# Technical Analysis

*“In investing, what is comfortable is rarely profitable.”*

Robert Arnott

## Key Takeaways

- Gold sentiment continues to oscillate between disinterest, agony, pessimism, and mild optimism
- Gold, silver, and mining stocks have a pronounced seasonality that can be used in short- and medium-term trading. June turns out to be an extremely favourable entry point. Especially the weekday seasonality seems remarkable.
- Midas Touch Model: Gold in sell mode since the beginning of May; final low around USD 1,250 to 1,280 in the coming one to three months? Rising triangle should push gold up to USD 1,500 in the medium term.
- Gold/silver ratio: trend reversal ahead?

## Technical analysis

*“I look for opportunities with tremendously skewed reward-risk opportunities. Don’t ever let them get into your pocket – that means there’s no reason to leverage substantially. There’s no reason to take substantial amounts of financial risk ever, because you should always be able to find something where you can skew the reward-risk relationship so greatly in your favour that you can take a variety of small investments with great reward-risk opportunities that should give you minimum drawdown pain and maximum upside opportunities.”*

Paul Tudor Jones

**Again this year, we complement our comprehensive macroeconomic, (geo-) political, and fundamental analysis with a technical analysis.**

Let’s quote from last year’s report at this point:

*The analysis of market structure, sentiment, and price pattern leads us to a positive technical assessment. From the perspective of the forward market, we have seen a speculative cleanse, which should lay the foundation for future price increases.... We expect only weak upward momentum for the coming weeks. This is largely due to the seasonality of the gold price, but also to some oscillators which are still in bearish territory.”*

**This assessment turned out to be quite correct. We will outline the development of the technical valuation metrics in the following pages.**

*“Men, it has been well said, think in herds; it will be seen that they go mad in herds while they recover their senses slowly and one by one.”*

**Charles Mackay**

**For a long-term assessment of the status quo, we are going to have a look at the Coppock curve again, which is a reliable momentum indicator.** <sup>230</sup> If the indicator turns upwards below the zero axis, i.e. assumes a positive slope, this is seen as a buy signal. The advantage of this indicator is that it reliably shows big trend reversals. The indicator switched to buy at the beginning of 2014 and has been gradually moving up ever since. At the beginning of 2018, the Coppock curve successfully rebounded from the zero line and thus confirmed the positive set-up. The MACD has been on a buy signal since the beginning of 2016 as well, edging higher at moderate speed. **We can also see that the 38.2% Fibonacci retracement around USD 1,350 continues to constitute a region of massive resistance**

<sup>230</sup> More precisely, we are talking about two time-weighted momentum curves that are added together and whose long-term moving average constitutes the Coppock curve. We use a modified Coppock curve with slightly extended periods.





### Gold, MACD, and Coppock indicator since 2001 (monthly)



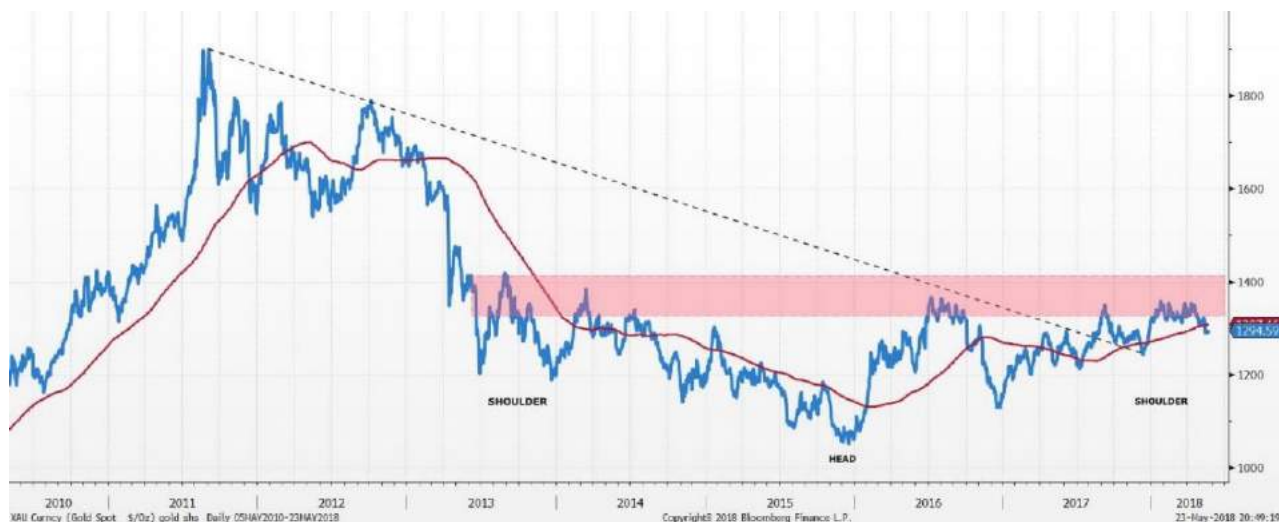
Sources: Bloomberg, Incrementum AG

*“Strength does not come from winning. Your struggles develop your strengths.”*

**Arnold Schwarzenegger**

The analysis of the chart since 2010 reveals that the impulsive increase of USD 280 to USD 1,920 has been subject to correction since 2011. This correction has led to the establishment of an impressive inverse shoulder-head-shoulder formation that could be resolved upwards in due course. **If the gold price were to break through this resistance zone, the next target would be USD 1,800, as calculated on the basis of the distance from the head to the shoulder line, projected upwards.** However, gold has failed to break through the neckline a few times in the resistance region of USD 1,360 to 1,400 and recently fell below its 200DMA.

### Gold (200-day moving average): shoulder-head shoulder formation



Sources: Bloomberg, Incrementum AG



## Sentiment analysis

*“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

*“Nothing is more obstinate than a fashionable consensus.”*

**Margaret Thatcher**

**Gold sentiment continues to oscillate between disinterest, agony, pessimism, and mild optimism.** According to Bloomberg, analyst consensus opinion remains without a dominant direction. Gold is expected to rise to USD 1,342 by 2021, which is de facto a sideways movement. We regard this development as extremely unlikely, given our analysis of market cycles. However, it should be noted that not one of the almost 30 polled analysts expects the gold price to remain below USD 1,000 in the long run. This is worrisome from an anticyclical perspective. **And there is only one analyst who expects the long-term price to rise above USD 2,000. Said analyst is, by the way, writing these lines.**

### Bloomberg: analyst consensus for gold and silver: Q2 2018-2021

	Sent.	Spot	Q2 18	Q3 18	Q4 18	Q1 19	2018	2019	2020	2021*
1) Gold \$/t oz		1311	1320	1321	1330	1340	1325	1355	1400	1444
Forecast (Median)			1325	1325	1314	1297	1315	1325	1306	1342
Diff (Median - Curr)			+5	+4	-16	-44	-10	-30	-95	-102
2) Silver \$/t oz		16.44	16.47	16.51	16.67	16.80	16.59	17.01	17.59	18.13
Forecast (Median)			17.00	17.00	17.07	17.20	17.00	17.60	18.75	20.00
Diff (Median - Curr)			+0.53	+0.49	+0.40	+0.40	+0.41	+0.59	+1.16	+1.87

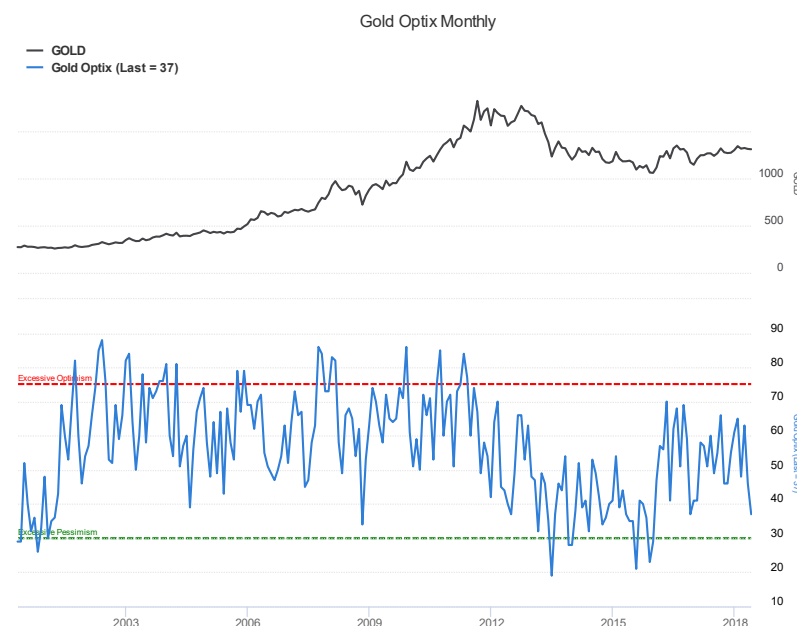
Sources: Bloomberg

*“Bull markets are born on pessimism, grow on scepticism, mature on optimism, and die on euphoria.”*

**John Templeton**

**One of our favourite sentiment indicators is the Optix Index from Sentimentrader.** The rationale of this sentiment barometer is abundantly simple: When public opinion forms a strong consensus, it is often wrong. The market tends to be too bullish once prices have increased (sharply) and too bearish when they have already fallen. When the Optix rises above the broken red line at 75 points, more caution is advisable. At 30 points or below, on the other hand, pessimistic sentiment is strong and downside risk is limited. **At the moment, the Optix is at 37 and thus close to the level that has in the past indicated a good buying opportunity.**

## Optix Index and gold price since 2000



*“The last leg of a bull market always ends in hysteria; the last leg of a bear market always ends in panic.”*

**Jim Rogers**

## Conclusion

In our opinion, the combination of still relatively low interest from investors and the lack of upside potential as perceived by analysts is a solid basis for the continuation of the slow and continuous upward trend that we have seen since the beginning of 2016. **So far, we have not seen the last of the bulls capitulate. It could happen around USD 1,260–1,280.**

## Seasonality

*“Timing the market is a fool’s game, whereas time in the market is your greatest natural advantage.”*

Nick Murray

*“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 have explained the pronounced seasonality of gold in recent editions of the *In Gold we Trust* report.** But with the help of our friends from Seasonax,<sup>231</sup> we have analysed a few specifics of seasonality that so far have received hardly any attention. Gold typically rises from the beginning of July to the end of February. Almost the entire average annual gain tends to occur during that period, while the remaining 167 days of the year hardly record any seasonal gains at all (on average just 0.30%). Thus, the perfect time to invest in gold could be immediately after the publication of the *In Gold we Trust* report!

<sup>231</sup> The following seasonal charts were kindly provided by Dimitri Speck, founder and head analyst of Seasonax. As an additional benefit, we offer all *In Gold we Trust* report readers the exclusive opportunity to analyze seasonal patterns of gold, silver, and individual mining companies. Use these insights to examine recurring patterns of more than 10,000 financial instruments, including currencies, commodities, stocks, and more.  
<https://app.seasonax.com/ingoldwetrust>





### Gold price in US dollars, seasonal development, based on the last 50 years



Source: [apps.seasonax.com/ingoldwetrust](https://apps.seasonax.com/ingoldwetrust)

**In years of US midterm elections, which tend to be very positive years as far as the performance of gold is concerned, the seasonality is even more profound.** Here, we regard June as the optimal time to enter the market.

### Gold price in US dollars, seasonal development in midterm election years



Source: [apps.seasonax.com/ingoldwetrust](https://apps.seasonax.com/ingoldwetrust)

*"The early bird gets the worm,  
 but the second mouse gets the  
 cheese."*

**Willie Nelson**

**And what about silver?** Silver typically rises sharply at the beginning of the year. It gains an average of 9.78% from the first trading day to the end of February and thus rises more in two months than in the entire rest of the year. Here, too, the reward/risk profile seems to be excellent at the end of June.

### Silver price in US dollars, seasonal development, based on the last 50 years



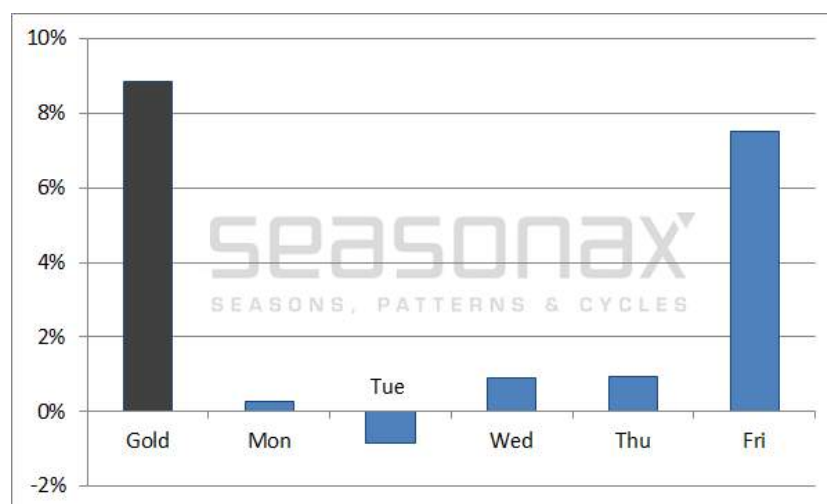
Source: [apps.seasonax.com/ingoldwetrust](https://apps.seasonax.com/ingoldwetrust)

*"It is impossible to produce a superior performance unless you do something different from the majority."*

**John Templeton**

**Not only is gold's yearly seasonality interesting but also the short-term perspective.** The weekday that stands out in terms of performance is Friday. At an annualised return of 7.50%, almost the entire annualised return of 8.84% is generated on the last day of the work week. Given that the observation period spans more than 4,600 trading days, this pattern is unlikely to be pure coincidence.<sup>232</sup>

### Gold: performance by weekday, 2000 to 2017



Source: [apps.seasonax.com/ingoldwetrust](https://apps.seasonax.com/ingoldwetrust)

*"The best thing about the future is that it comes one day at a time."*

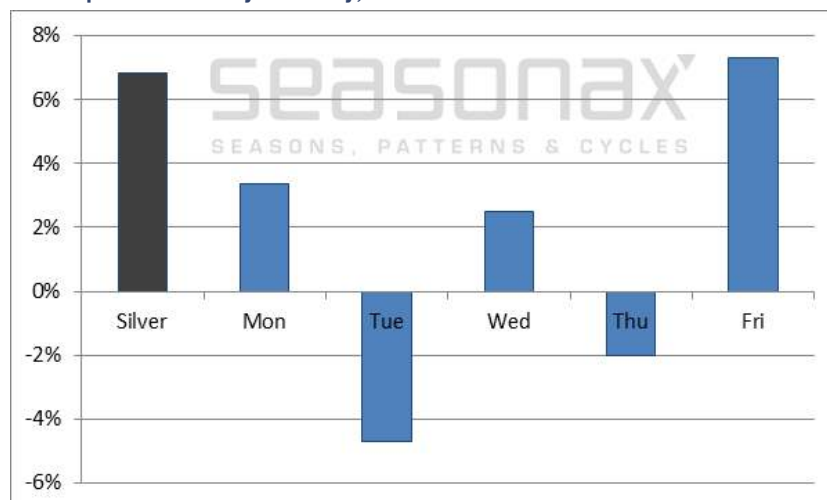
**Abraham Lincoln**

**This extreme weekday seasonality also applies for silver.** In fact, at an annualised performance of 7.32%, the Friday pattern is even more pronounced than for gold. The very weak pattern of 4.69% returns on Tuesday is particularly interesting. The weekday anomalies are substantial for both gold and silver, which is why they would appear to be highly relevant for short-term timing.

<sup>232</sup> Please refer to "The Strange Behavior of Gold Investors from Monday to Thursday", Seasonax, Dimitri Speck



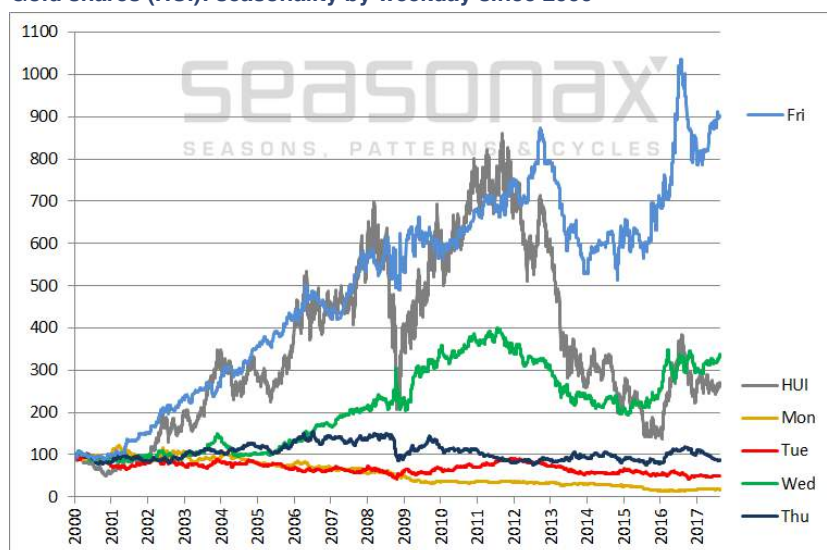
Silver: performance by weekday, 2000 to 2017



Source: [apps.seasonax.com/ingoldwetrust](https://apps.seasonax.com/ingoldwetrust)

Mining shares, too, exhibit a significant degree of weekday seasonality, with Friday posting the best performance here as well, as the following chart illustrates. It shows the indexed development of returns of the HUI gold mining index by weekday.

Gold shares (HUI): seasonality by weekday since 2000



Source: [apps.seasonax.com/ingoldwetrust](https://apps.seasonax.com/ingoldwetrust)

### Conclusion

Gold, silver, and mining shares are highly seasonal – a fact that one can put to good use in short- and medium-term trading. The month of June is an excellent time for opening positions. We regard the weekday seasonality as particularly remarkable and believe that it should be taken into account in the tactical allocation process.

## Excursus: The Midas Touch Gold Model™<sup>233</sup>

*“We forget that Mr. Market is an ingenious sadist, and that he delights in torturing us in different ways.”*

Barton Biggs

*A rational and holistic approach to analysing the gold market*

It is the goal of the Midas Touch Gold Model to rationally analyse the gold market from as many independent perspectives as possible and to derive a simple, short-to medium-term signal from the results. Although the model is based on a large set of data, it is possible to compile a comprehensive analysis in a succinct and clear fashion and summarise the bullet points in a relatively short period of time.

*What does the model look like, specifically?*

**The first building block, a trend-following indicator on the monthly chart, sent a buy signal in the middle of August 2017.** The weekly and daily charts zoom in more closely on the development of prices. The weekly chart turned bearish on 15<sup>th</sup> of May 2018, suggesting that it would take the gold price some time still to overcome the strong horizontal resistance zone around USD 1,350 to 1,375.

**The next step is the analysis of volatility.** Rising volatilities occur especially in downward movements, whereas rising trends tend to come with low volatilities. At the moment, volatility is extremely low, suggesting that there is very little speculative interest in the gold market.

*Ratios and changes in ETF holdings*

**The next two signals, the CoT data and sentiment, are anticyclical (“contrarian”).** The professionals (i.e. commercial traders) have recently cut their cumulative short position significantly, as a result of which the current assessment is neutral. At the same time, pessimism is on the rise (although the gold market has certainly not reached panic levels yet). An extremely pessimistic or panic-fuelled environment always tends to create ideal investment opportunities.

**In the next step, a number of ratios are integrated into the model.** In addition to the classic Dow Jones/gold ratio, which continues to favour equities over gold, the gold/silver ratio seems to have finally turned. This could stimulate the entire precious metal sector in the medium term. The model also takes into account the gold/oil ratio and sensitivity to other commodities. Whenever gold clearly outperforms other commodities, the safe-haven function of gold may be activated. In such cases, we can often see steep, irrational increases in the gold price. In lieu of investment demand, the model also analyses changes in the gold holdings of the biggest and most important gold ETF, SPDR Gold Shares (GLD), on a weekly basis.

<sup>233</sup> We would like to thank Florian Grummes for this excursus. Florian is the founder and managing director of Midas Touch Consulting ([www.midastouch-consulting.com](http://www.midastouch-consulting.com)). Our readers can follow this link to sign up for free updates and the newsletter: <http://bit.ly/1EUdt2K>



The model also provides two trend-following signals based on the price performance of the Chinese renminbi and the Indian Rupee. China and India already account for more than 50% of global physical gold demand. Of course, gold mining shares have to be in the mix as well. To this end, we use a trend-following chart of the mining ETF GDX and the according sentiment. The mining shares are often leading indicators of the gold price. At the moment, they are outperforming the gold price by a slight degree, which possibly indicates the fact that the ongoing gold sell-off is not sustainable. The model is complemented by US dollar performance data and the constellation of the US currency on the forward market as well as by the time series of real interest rates in the USA.

The Midas Touch Gold Model™ 05/20/2018					Version 1.2
Gold USD - Monthly Chart	\$1,292.88	Buy Signal 08/16/17, reversal @ \$1,213.51	Bullish		
Gold USD - Weekly Chart	\$1,292.88	Sell Signal 05/01/18, reversal @ \$1,361.13			Bearish
Gold USD - Daily Chart	\$1,292.88	Sell Signal 05/15/18, reversal @ \$1,318.57			Bearish
Gold Volatility CBOE Index	11.11	Volatility remains at extremely low levels		Neutral	
Gold CoT-Report	-118,089	Commercial short position neutral		Neutral	
Gold Sentiment	38	Sentiment getting too pessimistic		Neutral	
Gold Seasonality	May	Statistically -0.153, negative cycle until early summer			Bearish
Ratio DowJones/Gold	19.14	Sell Signal 11/25/16, reversal @ 17.42			Bearish
Ratio Gold/Silver	78.47	Buy Signal 04/16/18, reversal @ 83.05	Bullish		
Ratio Gold/Oil	18.09	Sell Signal 03/21/18, reversal @ 21.35			Bearish
Ratio Gold/Commodities (GNX)	2.64	Sell Signal 03/29/18, reversal @ 2.96			Bearish
SPDR Gold Trust Holdings (GLD)	855.28t	Minus 2.36t during last week			Bearish
Gold in \$, €, £, ¥	2 out of 4	Gold up against € & £, down against \$ & ¥ over 1 month		Neutral	
Gold in Indian Rupee	87,807₹	Sell Signal 05/17/18, reversal @ 89,232₹			Bearish
Gold in Chinese Yuan	8,247.4¥	Sell Signal 05/15/18, reversal @ 8,373.9¥			Bearish
GDX Goldminers - Daily Chart	\$22.19	Sell Signal 05/15/18, reversal @ \$23.01			Bearish
GDX Goldminers Sentiment	39	Sentiment getting too pessimistic		Neutral	
US-Dollar - Daily Chart	93.54	Buy Signal 05/15/18, reversal @ 92.22, negative for gold			Bearish
US-Dollar CoT-Report	-4,685	Commercials close to net neutral		Neutral	
US Real Interest Rate	-0.273%	3-month T-bill yield (1.91%) - change in the CPI (2.18%)	Bullish		
Gold Model is in Sell/Bearish Mode since 15th of May 2018					
© 2018 Midas Touch Consulting/Florian Grummes					MIDAS TOUCH CONSULTING

On 15<sup>th</sup> of May, the model switched to bearish, for the first time in a while. Although gold is already strongly oversold in comparative terms, the model is producing a clear sell signal. We expect either a final low in the area of USD 1,250 to 1,280 or a sideways back&forth-trading around the 200d Moving Average in the coming three months and continue to advise patience.

*A rising triangle should push gold up to USD 1,500 in the medium term.*

In the bigger picture, however, the gold price continues to run into a rising and thus bullish triangle. The “only” thing left for gold to do therefore is to test the rising trend line and then turn upwards again. Such a setback should help shake out the weak hands. This, in turn, would constitute the perfect setting for another attack on the crucial resistance zone of USD 1,350 to 1,375 this summer.

**For the second half of the year, we expect gold and especially silver to experience strong summer rallies, which might also lead to the long-awaited breakout.** Should this happen, the gold price could quickly rise to about USD 1,500, and silver to about USD 26.



### Conclusion

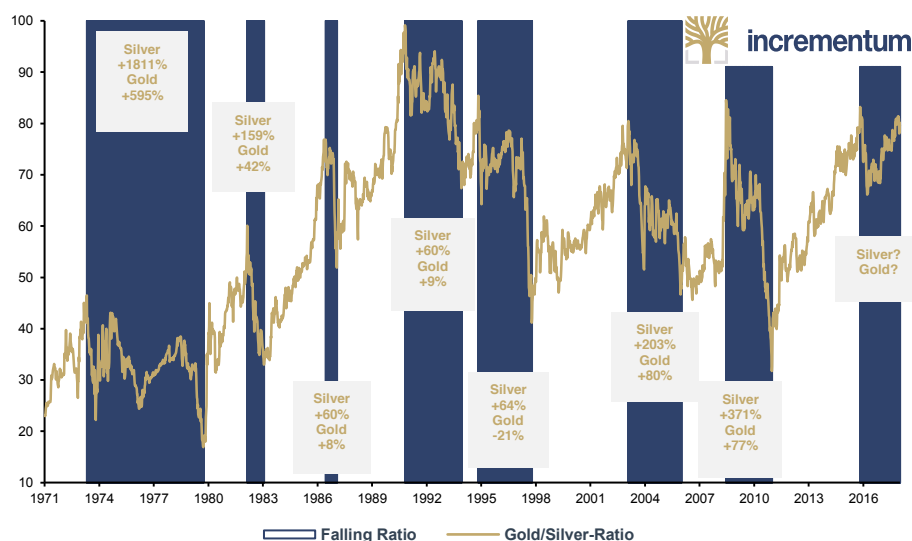
We are convinced that investors and traders can benefit from the Midas Touch Gold Model and its rational approach. Although the Midas Touch Gold Model faces as every model some limitations, it saves a lot of time and provides the user with a professional overview of the situation in the gold market. The model is updated every week and can be followed on [the website of Midas Touch Consulting](http://www.midas-touch-consulting.com).



## Technical analysis of the silver price

We have analysed the gold/silver ratio at length in the past. **According to the results of our statistical analysis, a sustainable increase in the gold price is unlikely to happen in tandem with an increase in the gold/silver ratio.** A falling gold/silver ratio significantly increases the probability of a bull market in gold. The following chart shows that the gold/silver ratio would normally fall in gold bull markets, i.e., silver would outperform gold.

### Gold/silver ratio: Falling ratio to be expected?



Sources: Bloomberg, Incrementum AG

*"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."*

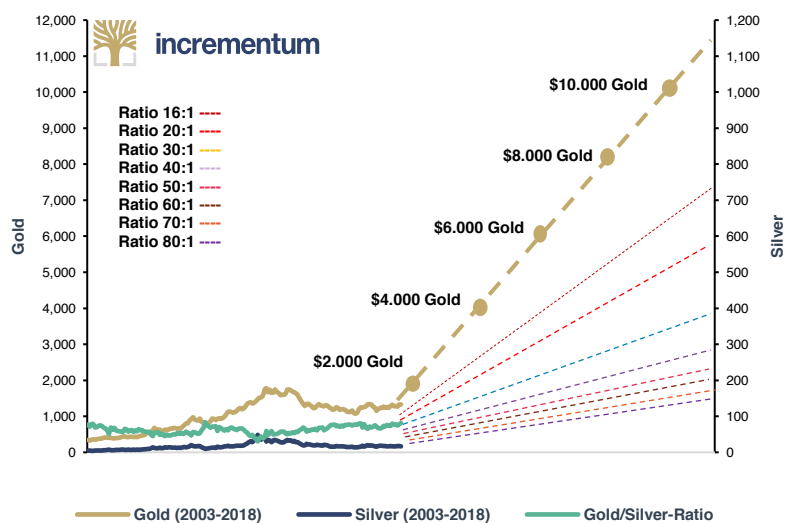
**Tim Price**

The chart highlights the fact that the gold/silver ratio is subject to significant fluctuations over time. We can see the ratio hitting a low of 16x around 1980 and then reaching 100x in 1991. At the moment, it seems as if the ratio has hit a potential trend reversal point again after an upward trend of almost seven years. The ratio has knocked at the upper resistance level of 80x several times already. **A new downward trend of the ratio would on the one hand signal a positive outlook for gold, and on the other hand rising inflation momentum.**

If our basic assumption of turning inflationary tendencies were to prove accurate, silver would probably be one of the best investments to benefit from rising inflation in the coming years. **At a gold price of US 2,300 and a gold/silver ratio of 40x (which we regard as absolutely realistic amid rising prices), we expect a silver price of USD 57.50.**



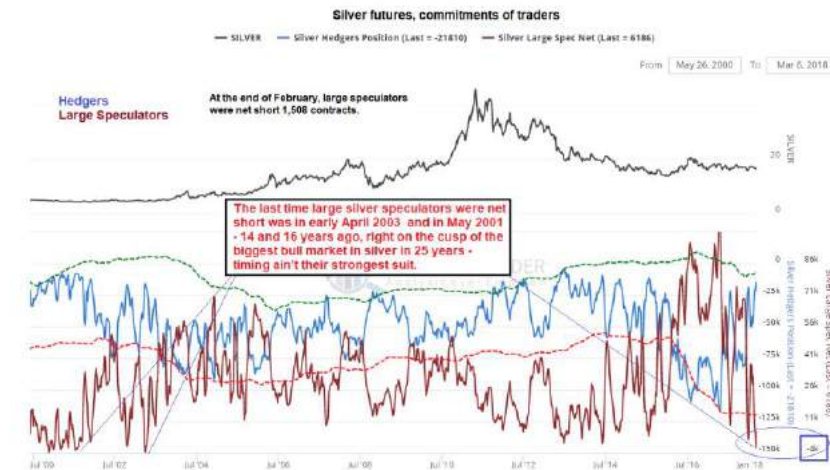
### Gold and silver prices in different G/S ratio scenarios



Sources: [www.goldchartsrus.com](http://www.goldchartsrus.com), Nick Laird, Mike Maloney, Bloomberg, Incrementum AG

As mentioned earlier, the technical picture of silver looks particularly exciting from a contrarian position. The “smart money” hedgers currently hold their lowest short exposure as compared to short interest in recorded history. According to Sentimentrader, this has been the case only twice, in July 1997 and June 2013, followed each time by rallies (77% and 35%, respectively).<sup>234</sup>

### Silver CoT: Capitulation of the bulls



Sources: Sentimentrader, Acting-man.com

Moreover, the group of large speculators are betting a record amount of 18,000 contracts on falling prices, which exemplifies the capitulation of the bulls. The risk of price declines seems limited given this one-sided positioning.

<sup>234</sup> Please refer to “Major Volatility As Gold/Silver Ratio Climbs”, Jason Goepfert, sentimentTrader.com

## Conclusion

**Our technical assessment of the gold and silver market is positive with regard to market structure, sentiment, and price pattern.** The market has experienced a speculative shake-out, which should lay a solid foundation for further price increases, albeit a final “wash-out” below USD 1,280 does not seem unlikely. The Coppock indicator generated a long-term buy signal at the end of 2015, and the sentiment still seems overwhelmingly sceptical. The CoT Report is also signalling limited downside risk, especially for silver. **Therefore, we regard the reward/risk profile of gold and especially silver as extremely attractive at the moment.**

# Conclusion

*“Invest in things that have never happened before, hedge for regression to the mean, and plan for the unimaginable.”*

John Burbank

## Key Takeaways

- The tides are turning – we have identified three crucial fundamental changes that are currently unfolding:
  - 1) Turning of the tide in monetary policy: QT instead of QE
  - 2) Turning of the tide in the global monetary order: de-dollarization
  - 3) Turning of the tide in technology: (gold-covered) cryptocurrencies that have turned into serious competition for governmental fiat currencies
- We remain bullish on gold, silver and mining stocks.

*“Come gather ’round people  
Wherever you roam  
And admit that the waters  
Around you have grown  
And accept it that soon  
You’ll be drenched to the bone.  
If your time to you  
Is worth savin’  
Then you better start swimmin’  
Or you’ll sink like a stone  
For the times they are a-changin’.”*

Bob Dylan

*“People today are still living off  
the table scraps of the sixties.  
They are still being passed  
around – the music and the  
ideas.”*

**Bob Dylan**

“The Tides They Are a-Changin’”: This slightly adjusted title of Bob Dylan’s famous song is a fitting opening to our summary of this year’s *In Gold we Trust* report. Quantitative tightening, de-dollarization, and cryptocurrencies seem to be echoing the strains of R.E.M.’s “It’s the End of the World as We Know It”. Whether we find this changing of the tide good or bad is of no relevance to the phenomenon itself. What is unfolding will affect our lives either way. But the better we brace ourselves for these fundamental changes, the more we will be able to benefit from them.

The key findings of this year’s *In Gold we Trust* report may be summarized in terms of the following three changings of the tide:

#### **Change of the tide in monetary policy**

The reversal from QE to QT has provoked remarkably little attention in public discourse. However, the consequences of this monetary U-turn could be dire, because the monetary amphetamine that prevented a relapse into crisis in the post-Lehman era has come with numerous side effects.

On one hand, the monetary medicine has effected a *da capo* of global debt excesses. In theory, Mario Draghi’s “Whatever it takes” policy should have bought Southern European countries time for structural reforms and debt reduction. In reality, near-zero and subzero interest rates acted as an incentive to accumulate more debt.

*“Emancipate yourselves from  
mental slavery,  
None but ourselves can free our  
minds.”*

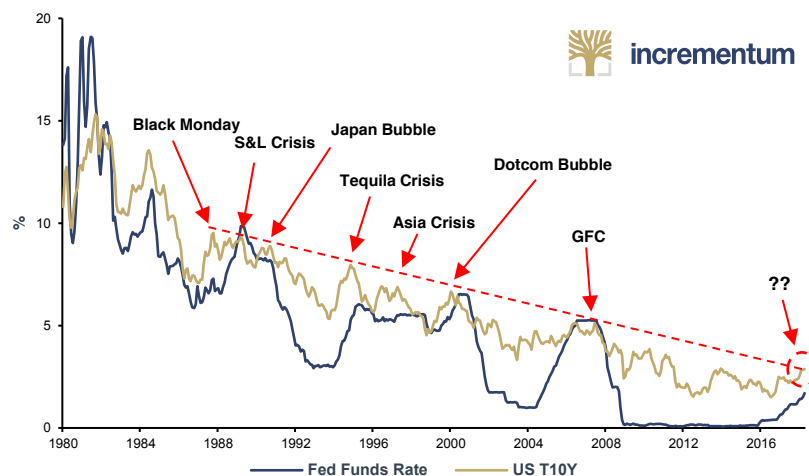
**Bob Marley,  
“Redemption Song”**

On the other hand, investors have grown familiar with today’s allegedly less risky capital market environment and have fallen in love with it. Now the first dark clouds are gathering on the (interest) horizon. Not only the Fed but also the ECB is slowly but surely leaning into the monetary turn.<sup>235</sup> (although with a substantial time lag).

<sup>235</sup> Jan Smets, a member of the ECB Council, has announced a possible date for euro QExit. After the rotational Council meeting at the end of July, the ECB could actually perform a gradual exit from the bond purchase programme. See <https://www.wsj.com/>



### Federal funds rate & UST 10Y



Sources: Federal Reserve St. Louis

### Change of the tide in the global monetary order

De-dollarization and the reshaping of a unipolar world monetary regime into a multipolar one continue. Admittedly, these transitions are occurring in small (and sometimes hardly recognizable) steps; but the trend is clear.

*“The future’s in the air  
I can feel it everywhere  
Blowing with the wind of  
change.”*

**The Scorpions,  
“Wind of Change”**

*“When it is time for us to sell, or  
even to stop buying, the response  
could be quite strong; there is  
every reason to expect a strong  
response...”*

**Jay Powell**

*“I am not in danger. I am the  
danger!”*

**Walter White,  
Breaking Bad**

The process comes with geopolitical polarization and rhetoric that promotes divisiveness above unification. This tendency reached a new peak with Donald Trump’s election. Those European politicians in particular who do not conceal their deeply rooted feelings of antipathy toward the property tycoon in the White House are trying to seize the geopolitical moment to escape the shackles imposed by the US at least by a bit. Demands for an EU army are testament to this emancipation movement (as was the establishment of the euro a generation ago).

**Intensifying trade conflict is going hand in hand with the currency war, which was declared a while ago.** Even though the trade war is still being fought with blanks, the increasingly martial rhetoric and the rising degree of irrationality inherent in trade policy decision-making have added to economic and political uncertainty. While the measures taken so far have affected only a very small portion of the economy, the importance of the measures as symbolic political acts cannot be underestimated. <sup>236</sup> For the US, the gradual loss of currency hegemony could have far-reaching consequences. Falling demand for the US dollar and Treasuries could fuel both inflation and interest rates.

It remains to be seen what effects the debt problem will have on the changing of the tide in foreign exchange policy, especially since no one can do away with the hard truth that one party’s receivable is the other party’s liability. Whoever suggests the culling of nominal debt has to be aware of the fact that financial assets have to be written off at the same time and in the same amount as counterparty liabilities. The geopolitical powder keg that such a debt jubilee would set off needs no detailed explanation.

<sup>236</sup> At this point, we would like to refer to our Advisory Board member Jim Rickards, who has repeatedly alerted us to the sequence “currency war – trade war – shooting war”.





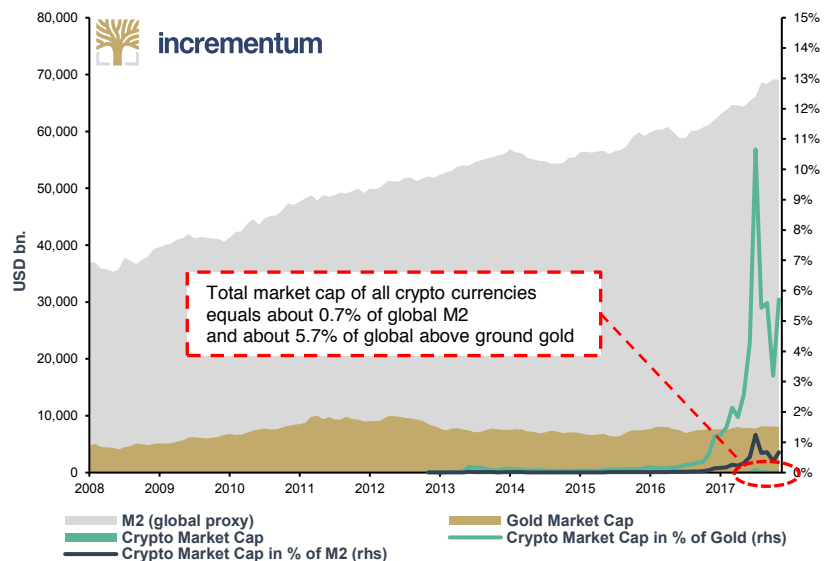
*“Sometimes things happen in an instant that would not have seemed imaginable within a year.”*

**Emperor Ferdinand I**

### Change of the tide in technology

We have experienced a swift technological shift of epic proportions. More and more financial transactions are being executed via smartphone and the internet. The advent of cryptocurrencies has led to further acceleration of the digitalization of money. Fascinatingly, the emergence of these new technologies has set off a Hayekian competition that is attracting human and financial capital keen on innovation.

### M2, gold and crypto-market cap in USD bn and in % of M2



Sources: Bloomberg, coinmarket.com, Incrementum AG

*“Our times are not special. They are only presented as something special because it is the present. Fear of the future is an inherent part of the human condition.”*

**Robert Rethfeld**

With regard to cryptocurrencies, we are convinced of two truths: (1) Cryptocurrencies and especially the underlying decentralized ledger technologies will fundamentally change business and possibly the reality of the global monetary order,<sup>237</sup> and (2), gold and cryptocurrencies are friends, not foes. In fact, a collaborative approach would play to the strengths of both. The first gold-based cryptocurrencies are underway as we speak.

**Each of these three tidal changes holds the potential of inflicting fundamental transformation on the world. But what does this turning of the tide, the first signs of which we are now seeing, mean for the price of gold?**

*“I think people expect too much from gold.”*

**Adrian Day**

A glance at the status quo on the financial markets shows the headwinds that gold currently faces:

- Equities are still in a bull market and are trading close to their all-time highs.
- Volatility remains relatively low.
- Real estate (aka “concrete gold”) is regarded as the *asset sans alternative* in many places.

<sup>237</sup> The Marshall Islands passed a law on the introduction of a cryptocurrency in February 2018. The SOV will be legal tender at eye level with the US dollar (currently the only legal tender): See <https://www.cnn.com/>. Venezuela started circulating a governmentally sanctioned cryptocurrency, the Petro or Petromoneda, in February 2018.

- Robust economic growth
- (Official) Price inflation remains relatively low.
- US interest rates are rising.
- Central banks are becoming more hawkish – QT instead of QE.
- Cryptocurrencies are stealing the limelight from gold.

Mulling over this list, we were reminded of a statement by our esteemed colleague Adrian Day: *“People expect too much from gold! Whatever scenario you’re in, everyone expects gold to react more than it does. But when you think about what gold has done, I think it has done very well this year.”*<sup>238</sup> **In other words, gold aficionados should not fall prey to the mistake of expecting excessive price gains as long as those headwinds prevail.**

*“So, while there are no obvious triggers for historically high global asset valuations to correct, while they remain this high there is always a risk of a sudden correction that could be destabilising to a financial system and global economy that seems to require such elevated asset prices.”*

**Jim Reid**

**We also have to point out in this summary a new aspect of the financial markets, one that might turn into a blessing for gold.** What distinguishes the current phase decidedly from the runup to earlier big stock exchange crashes (1929, 1987, 2000, 2008) is the simultaneously high valuations of stocks *and* bonds. Previously, bonds would help contain any losses on the stock exchanges due to the negative correlation of these asset classes. However, bond valuations have climbed into extremely thin air at this point. From a purely mathematical perspective, bond prices will hardly be able to post any further gains unless the Federal Reserve takes a dramatic step towards negative interest rates. **A fantastic piece by Deutsche Bank recently showed that an equally weighted index of shares and bonds is currently trading at the highest level since 1800 (!).** Sooner or later the financial markets will have to bow to the law of gravity and embark on the return trip to the mean – which could catch many portfolios on the wrong foot.<sup>239</sup>

So what happens if both shares and bonds dive in a bear market? What will be the safe haven, now that the traditional pattern of negative correlation has changed? Will it be cash, property, Bitcoin, or – yet again – gold? **We are convinced that in such a scenario, gold will be among the biggest beneficiaries.**

*“The only permanent truth in finance is that people will get bullish at the top and bearish at the bottom.”*

**Jim Grant**

**Our discussion has shown that gold should benefit from a dynamic environment of fundamental change. But what about the short- and medium-term outlook for gold?** Last year we established several scenarios for the gold price that were in tune with the momentum of GDP growth and the further development of US monetary policy. The time horizon we used was the term of office of the current US administration (2017-2021), by the end of which period the Fed expects monetary normalization to have been achieved.

Term period dominated by	Growth	Monetary normalization	Gold price in USD
<b>Scenario A: Genuine boom</b>	Real growth > 3% p.a.	Success; Real interest rates >1.5%	<b>700–1,000</b>
<b>Scenario B: Muddling through</b>	Growth & inflation 1.5-3% p.a.	Still not fully successful	<b>1,000–1,400</b>

<sup>238</sup> *“People expect too much from gold”*, Kitco.com interview with Adrian Day

<sup>239</sup> “Long-Term Asset Return Study. The Next Financial Crisis”, Jim Reid, Deutsche Bank Research, 18 September 2017



*“No one can possibly know what is about to happen: it is happening, each time, for the first time, for the only time.”*

**James A. Baldwin**

**The path of the gold price has so far moved in the range of scenarios B and C.** The actual growth and inflation figures reflect this path rather well. The crucial issue will be whether the feat of the monetary normalization is successful and whether scenario B or C will prevail in the coming years. A recession is overdue; the changing of the tide in monetary policy could trigger one in the coming 6 to 24 months.<sup>240</sup>

**How does the gold price perform in recessions? Short answer: Very well!** On the one hand investors are looking for safe havens in times of crisis, and gold is the classical safe haven asset; on the other hand many investors will anticipate monetary and fiscal stimulus and buy gold for inflation protection.

#### Gold performance during US recessions

Decade	Gold Start (USD/oz)	Gold End (USD/oz)	Change (%)
11/1973 – 03/1975	100	178	78.0
01/1980 – 07/1980	512	614	20.0
07/1981 – 11/1982	422	436	3.3
07/1990 – 03/1991	352	356	1.0
03/2001 – 11/2001	266	275	3.5
12/2007 – 06/2009	783	930	18.8
Mean			20.8

Sources: Deutsche Bank, Incrementum AG

**We have also distilled these additional key findings from this year’s journey through the world of gold:**

- **Technical analysis gives us a positive outlook on the gold price.** The risk/reward profile of gold seems extremely attractive, and the profile for silver may be even better. The weekday seasonality of gold has been remarkable, with Friday being the best day and Tuesday the worst for the gold price.
- **We also see an excellent reward/risk profile for the mining sector.** On the basis of our premise that gold has now re-entered a bull market, we expect the gold/silver ratio to fall in the medium term. In this scenario, we should see outstanding investment opportunities for silver mines in particular. In our investment process, we remain focused on developers and emerging producers.
- **So as not to be caught on the wrong foot, we have analyzed a vast array of different potential crisis triggers.** One of our general conclusions is that gold’s performance exhibits an inverse relationship to the

*“Whether we’re talking about socks or stocks, I like buying quality merchandise when it is marked down.”*

**Warren Buffett**

<sup>240</sup> Dr. Lacy Hunt just pointed out that since the early 1900s, money supply (M2) decelerated prior to 17 of the 21 recessions. In the first quarter of 2018, M2 growth decelerated to just above a 2% annual rate. Year-over-year M2 growth slowed to just 3.9% versus the 6.6% long-term average growth. Additionally, bank credit growth declined 0.6% at an annual rate. (See: *Hoisington Quarterly Review and Outlook*, First Quarter 2018.)

monetary system's perceived soundness and thus offers effective protection against inflation and crises, not the least in situations whose details are not predictable.<sup>241</sup>

- **We have always put gold under scrutiny from a portfolio perspective.** This year, we focus on the importance of gold reserves for central banks. Remarkably, since the financial crisis in 2008, not only has the trend towards the reduction of gold reserves been stopped, but the central banks have actually reversed the trend and boosted their reserves drastically. The central banks of China, Russia, India, and Turkey – i.e. emerging economies across the board – have increased their gold reserves, sometimes by a significant amount. This renaissance of gold is also testament to the declining trust in the US-centric monetary and global political regime.
- As far as the struggle between inflationary and deflationary forces is concerned, we can see that inflation has gained in strength over the past year. **Our Incrementum Inflation Signal has also indicated rising inflationary tendencies since September 2017.**

*“A friend asked me to choose one investment that I would want to leave to my great-great-grandchildren. I immediately answered that it would be gold coins. The reason I explained is as follows – corporations can disappear, stocks can collapse, governments can change and they can fall, booms and recessions come and go – but gold is intrinsic money, and no man or nation has ever doubted its value. And they never will.”*

**Richard Russell**

**The central point is this: The global boom, fueled by ultra-low interest rates and the never-ending expansion of the money supply and credit, is on shaky ground.** The likelihood of the boom turning into a bust is high – much higher than the mainstream expects.

**We therefore anticipate a significant global economic dislocation with a substantial effect on the gold price in the coming years.** As always, we will monitor these events, analyze them in detail, and comment on them regularly. Gold will definitely contribute to staking out a comfort zone in the turmoil of the tidal changes that we have discussed.

[www.ingoldwetrust.report](http://www.ingoldwetrust.report)

<sup>241</sup> See “Gold in the context of portfolio diversification”, *In Gold we Trust* report 2016, pp. 100-107



## About us

### Ronald-Peter Stoeferle, CMT



Ronnie is managing 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 international bestseller “*Austrian School for Investors*”. In 2018 he will publish “*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 a 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.

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 will publish “*Die Nullzinsfalle*” (*The Zero Interest Rate Trap*) in 2018.



## 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. Our clients appreciate the unbiased illustration and communication of our publications. **Our goal is to offer solid and innovative investment solutions that do justice to the opportunities and risks of today's prevalent complex and fragile environment.**

[www.incrementum.li](http://www.incrementum.li)

**We would like to thank the following people for their outstanding support in creating the *In Gold we Trust* report 2018:**

Gregor Hochreiter, Richard Knirsch, Christoph Neubauer, David Holzinger, Heinz Blasnik, Niko Jilch, Atle Willems, Hans Fredrik Hansen, Pascal Hügli, Marc Waldhausen, Richard Zeiss, Dr. Richard Zundritsch, Tobias Müller, Demelza Hays, Yannick Möhring, Lars Haugen, Philip Barton, Brent Johnson, Florian Grummes, Markus Blaschok, Elizabeth und Charley Sweet, Florian Hulan, Tea Muratovic, Dimitri Speck, Luis Enrique, Carsten Ringler, Georg Bühler, Christian Niedermüller, our friends at the World Gold Council, Jordan Eliseo, Luke Gromen, and the whole Incrementum family and especially Thomas Vesely!

### Contact

Incrementum AG  
Im Alten Riet 102  
9494 – Schaan/Liechtenstein

[www.incrementum.li](http://www.incrementum.li)  
[www.ingoldwetrust.li](http://www.ingoldwetrust.li)  
Email: [ingoldwetrust@incrementum.li](mailto:ingoldwetrust@incrementum.li)

### Disclaimer

This publication is for information purposes only, and represents neither investment advice, nor an investment analysis or an invitation to buy or sell financial instruments. Specifically, the document does not serve as a substitute for individual investment or other advice. The statements contained in this publication are based on the knowledge as of the time of preparation and are subject to change at any time without further notice.

The authors have exercised the greatest possible care in the selection of the information sources employed, however, they do not accept any responsibility (and neither does Incrementum AG) for the correctness, completeness or timeliness of the information, respectively the information sources, made available, as well as any liabilities or damages, irrespective of their nature, that may result there from (including consequential or indirect damages, loss of prospective profits or the accuracy of prepared forecasts).

Copyright: 2018 Incrementum AG. All rights reserved.



