

in **gold** we trust
.report

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Extended Version



Gold in the Age of Eroding Trust



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 2019



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Introduction

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

Oliver Wendell Holmes

Key Takeaways

- Trust is the basic value of interpersonal cooperation and the cement of our social order. The erosion of our “trust capital” can be observed in many areas of society.
- The breakdown of trust in the international monetary order is manifesting itself in the highest gold purchases by central banks since 1971 and the ongoing trend to repatriate gold reserves.
- Gold reaffirmed its portfolio position as a good diversifier as trust in the “Everything Bubble” was tested in Q4/2018. While equity markets suffered double-digit percentage losses, gold gained 8.1% and gold mining stocks 13.7%.
- The normalization of monetary policy was abruptly halted by the stock market slump in Q4/2018. The “monetary U-turn” that we already forecasted last year has begun.
- Recession risks are significantly higher than discounted by the market. In the event of a downturn, negative interest rates, a new round of QE, and the implementation of even more extreme monetary policy ideas (e.g. MMT) are to be expected.
- When it comes to trust in investments, our vote is clear. Trust looks to the future, forms itself in the present, and feeds itself from the past. Gold can look back on a successful five-thousand-year history as sound money.

“Gold is ‘clotted’ trust or, if you like, clotted mistrust against all other promises of value. That leads us to the trail of its strange price movements: Its price rises wherever mistrust arises (mistrust of the future, politics, rulers), and it falls or stagnates where trust prevails.”

Roland Baader

In front of you, dear reader, lies the 13th edition of our *In Gold We Trust* report.¹ It’s a special edition. Never before have we invested so much time, energy, money and passion into this report. Never before has the team for the report been so large. And never before have we analyzed such a broad spectrum of topics. For the first time, we are publishing the *In Gold We Trust* report in China, for a market that is becoming increasingly important for us and for the gold industry.

But it is also a special vintage because we have chosen a theme that is of the utmost importance for both interpersonal cooperation and economic prosperity. The term is so crucial that it is an integral part of the name of our annual publication: **trust**.

Let’s start with the definition:

trust: firm belief in the reliability, truth, ability, or strength of someone or something.^{2,3}

*Love all,
 trust a few,
 do wrong to none.*
William Shakespeare

Trust is often underestimated. Many of us take trust for granted, but almost all **human interactions are based on trust**. When visiting a restaurant, we trust that the cook will not use any spoiled ingredients, ensures cleanliness in the whole preparation process, that eventually results in a tasty meal. We trust that the pilot, crew, and technicians will do a good job when we get on a plane and go on holiday. We trust that our friends are there for us when we really need them, and we trust our partner to always remain faithful to us. Without a minimum of trust, a human relationship – even in a rudimentary form – is simply unthinkable. **Trust is the basic value of human interaction and the cement of our social order.**

In a constitutional state, citizens trust state institutions to respect and protect their private property. But equally private and public institutions such as the media and science build on a certain basic trust.

¹ All previous issues can be downloaded free of charge from our [archive](#).

² Oxford Dictionary entry “trust”

³ Wikipedia entry “Trust”: On the etymology of trust: “Trust has been known as a word since the 16th century (Old High German: “fertruen”, Middle High German: “vertruwen”) and goes back to the Gothic *trauan*. The word “trust” belongs to the group of words around “faithful” = “strong”, “firm”, “fat”. In Greek this means “πίστις” (pistis) (“faith”), in Latin “fiducia” (self-confidence) or “fides” (faithfulness). Thus, in ancient and medieval use, trust stands in the area of tension between good faith and faith (e.g. with Democritus, who demands not to trust everyone, but only the tried and tested). For Thomas Aquinas, “Trust is hope confirmed by experience for the fulfillment of expected conditions under the premise of trust in God.”. Our translation.

Trust looks to the future, forms itself in the present, and feeds itself from the past.

When mistrust comes in, love goes out.

Irish proverb

Trust, but verify.

Ronald Reagan

Gaining trust, erosion of trust, and social polarization

Trust within a society must grow; it is not simply there. Societies are characterized by different levels of trust. A distinction is made between so-called “high-trust societies” and “low-trust societies”.⁴ In a high-trust society, individuals are more open to new personal friendships and new business relationships, while in low-trust societies there are major barriers to building trust with people outside the family.⁵

Similar to the capital stock of a society, whose abundance and stability leads to a more productive economy, trust capital can also be consumed and gambled away. As with physical capital, *building* trust capital is much more difficult than *consuming* it; and as with physical capital, consumers of trust capital can consume too much of it in the short term –taking without giving.

The Western world is to a large extent a high-trust society. Cooperation is no longer based on belonging to a small, tight-knit community such as a clan, but rather to a comparatively anonymous society in which people trust each other without necessarily knowing each other. Without this advance of trust, without this open approach to each other, there can be no mutually beneficial cooperation. **However, there is growing evidence that this trust is increasingly eroding.**

Trust in institutions such as politics, science, and the media is of crucial importance to society. Confucius was of the opinion that three things were necessary for governance: weapons, food, and trust. If a ruler is unable to obtain all three things, he should first give up weapons, then food, and finally trust.⁶

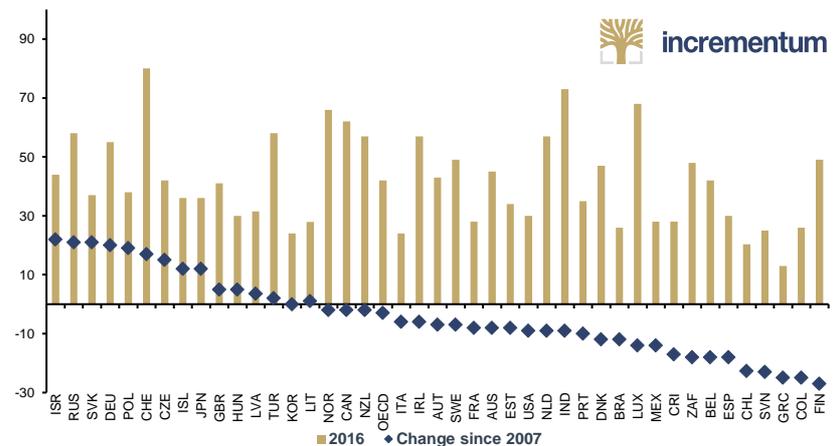
Politics, science, and the media have suffered losses of confidence in recent years, some of which have been significant. Since 1972 the General Social Survey has measured the confidence of Americans in various institutions. Since 2000 confidence in virtually all institutions has eroded, with the exception of the military. Only one in five persons still has confidence in banks, churches, or big business and only one in ten (!) in the government. According to the next graph, trust in politics is eroding all over the globe.

⁴ See Wikipedia entry “[High trust and low trust societies](#)”, as well as Stoeferle, Ronald, Hochreiter, Gregor and Taghizadegan, Rahim: [Die Nullzinsfalle](#) (The Zero-Interest Trap), FinanzBuch Verlag, 2019, chapter 3.

⁵ See Govier, Trudy: *Social Trust and Human Communities*. 1997, pp. 129 ff.

⁶ Haumer, Hans: *Vertrauen. Angst und Hoffnung in einer unsicheren Welt* (Trust. Fear and hope in an uncertain world). 2009, p. 101

Trust in governments, in %, 2016 and change since 2007



Source: OECD, World Gallup Poll., Incrementum AG

We don't want a future. We just don't want the present to stop.
Philipp Blom

Among millennials, confidence in democracy is waning, says Neil Howe: *“Millennials are the least likely to actually think that democracy is important. A lot of millennials look at democracies today and they see these are governments which seem to be perennially dysfunctional. All they do is borrow from our future. They do nothing to invest in our future.”* Howe refers to studies by Harvard professor Yascha Monuk showing that not only American but also Western European youth have lost faith in democracy. The later the interviewees were born, the lower their confidence in democratic institutions and the greater their desire for strong leaders.⁷

A by-product of the loss of trust is the spreading polarization of society.⁸ This development is so pronounced that the degree of polarization sometimes culminates in personal contempt and even violent acts. Surveys show that Americans, for example, are politically more polarized than they have been since the Civil War. Since the election of Donald Trump as US president, one in six US citizens no longer talks to a close relative or once close friend if they belong to the other political camp.⁹

When the heavens laugh, great problems become small; when the heavens weep, small problems become great.
Chinese Proverb

In Europe, too, different symptoms of loss of trust can be seen, accompanied by increasing social polarization. The emergence of right-wing and left-wing populist parties and movements is not the only sign of a loss of confidence in the established party landscape. Phenomena such as the Yellow Vests protests in France and the Reich citizens’ movement in Germany are clear indications that some European citizens are withdrawing confidence from the government. The Friday-for-Future movement, which openly accuses politicians of failing to live up to their responsibilities, has recently joined the ranks of the disaffected.

⁷ See [“Neil Howe: Super-bullish the U.S.A. in the 2030s. But between now and then...”](#), Macrovoices Interview, April 2019

⁸ See [“Populism and its true root”](#), In *Gold We Trust* report 2017

⁹ See Gaulhofer, Karl: [„So klappt es auch mit Feinden”](#) (This is also how it works with enemies), *Die Presse*, April 10, 2019: “Since 2014 the asymmetry in the attribution of motives (my convictions are based on love, yours on hatred) has been as great as between Palestinians and Israelis. Nine out of ten Americans suffer from the division.” (Our translation). In this respect, the book *Love Your Enemies*, by Arthur C. Brooks is recommended.

Envy is an enemy of trust. By breeding the envy complex populists undermine social trust.

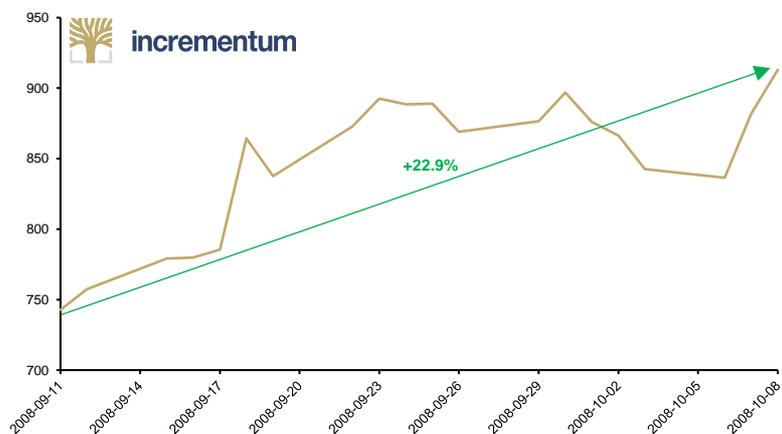
Hans Haumer

Trust in the mass media has undoubtedly also declined. Donald Trump, who has regularly questioned the integrity of the press in the USA since taking office, has contributed to this. Numerous other media events, such as the scandal surrounding the German journalist Claas Relotius, who made up some of his reporting,¹⁰ have also further damaged confidence in the media. The designation of the mainstream media as a “lying press”, spouting “fake news”, is an expression of this loss of trust, which further deepens social polarization.

Trust in science is also declining. Skepticism towards scientific findings is widespread. Much attention is paid to topics such as climate change, which are highly emotional, but the various camps are deeply distrustful of the scientific facts presented by the other side. The loss of confidence also manifests itself in doubts about highly conventional scientific findings. Thus, dubious worldviews such as the “Flat Earth Theory” are enjoying increasing popularity.¹¹

The phenomena of the increasing erosion of trust are fascinating and worrying, but they should not be the focus of this publication. Nevertheless, we wanted to start by deliberately pointing out such developments in order to put the leitmotif of this year’s report into context. **Because if the level of public trust is declining, that may have serious implications for one of the most important institutions of our society: money.**

Gold price during Lehman crash, in USD, 11/09/2008-08/10/2008



Source: Federal Reserve St. Louis, Incrementum AG

When you devalue money, you devalue trust.

Dylan Grice

Trust in the monetary system

High basic trust within a society results in economic prosperity, because only trust enables an efficient division of labor. One prerequisite for this is a medium of exchange that enjoys general trust, because otherwise the exchange of goods and services becomes constrained, highly inefficient and costly. Money is ultimately spiritual energy which man acquires, reasonably consumes, gives away, or gambles away. Money is thus nothing more than an abstract energy store. But in order for fairness of exchange to be maintained over time, money should be a stable

¹⁰ See [All posts on the Claas Relotius case](#), spiegel.de

¹¹ See Stoeferle, Ronald: [Keynote Presentation](#) at the European Gold Forum Zurich, April 2019

measure of trust.¹² David Hume described trust as a *performance of promises*, which perfectly captures the perfidy of inflation. **Inflation is a devaluation of the future through broken promises.**



Courtesy of Hedgeye

As our loyal readers know only too well, our current monetary system has been de facto uncovered and dematerialized for almost half a century now. All the more important, therefore, is the aspect of trust. Looking at monetary history from the point of view of confidence, one can see a history of ups and downs of dwindling and regained confidence.

The asymmetry of trust means that the fear of loss triggers greater, faster, and stronger reactions than the expectation of gain.

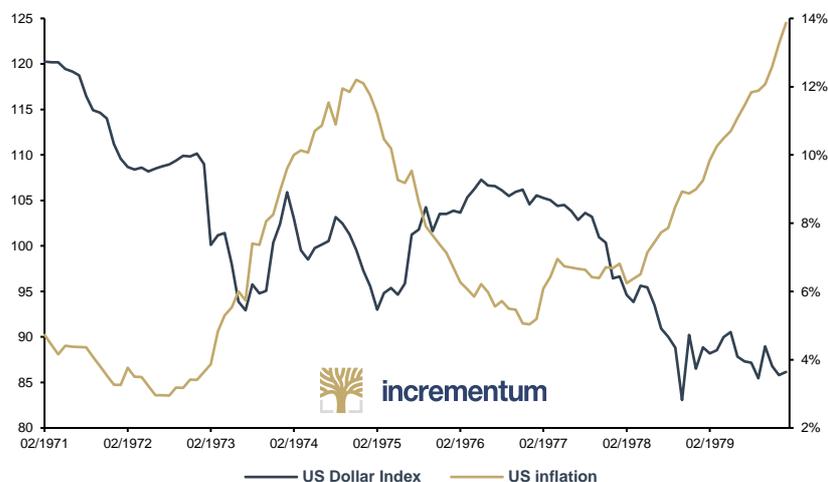
Hans Haumer

In the first decade after the final dematerialization of the monetary system in August 1971, the international monetary system was seriously shaken. Several US recessions, coupled with international conflicts and high price inflation, put the now uncovered world reserve currency under enormous pressure. International investors increasingly lost confidence in the US dollar. In 1978, US bonds had to be issued in the hard currencies of the Swiss franc and the German mark – the so-called Carter bonds.¹³

¹² See Haumer, Hans: *Vertrauen. Angst und Hoffnung in einer unsicheren Welt.* (Trust. Fear and hope in an uncertain world). 2009, p. 85.

¹³ See U.S. Department of Treasury: "[Resource Center – International – Exchange Stabilization Fund – History](#)"

US Dollar Index (left scale) vs. US inflation (right scale), in %, 02/1971-12/1979



Source: Federal Reserve St. Louis, Incrementum AG

It takes 20 years to build a reputation and five minutes to ruin it.

Warren Buffett

The Federal Reserve under the chairmanship of Paul Volcker was able to turn the tide, rehabilitate the US dollar, and successively restore confidence only through a **highly restrictive monetary policy that led to sky-high interest rates and is still unparalleled today**.¹⁴ The capital of trust in the US-centric order continued to be restored with the fall of the communist Eastern bloc in the early 1990s. In the struggle of systems, the “neoliberal capitalist system” associated with the USA emerged as the supposed victor. There remained a geopolitical tailwind for the US-centric world order until the mid-2000s. The influential US geostrategist Zbigniew Brzezinski said that the US was “*the only comprehensive global superpower*”¹⁵. **But the events of the years 2008-2009 represented a serious turnaround. For the first time since the 1980s, confidence in the US-centric system was fundamentally eroded, as the global credit crisis originated from within the USA.**



Source : Wiki Commons

The toughest thing about the power of trust is that it's very difficult to build and very easy to destroy.

Thomas J. Watson

Erosion of trust in international monetary policy

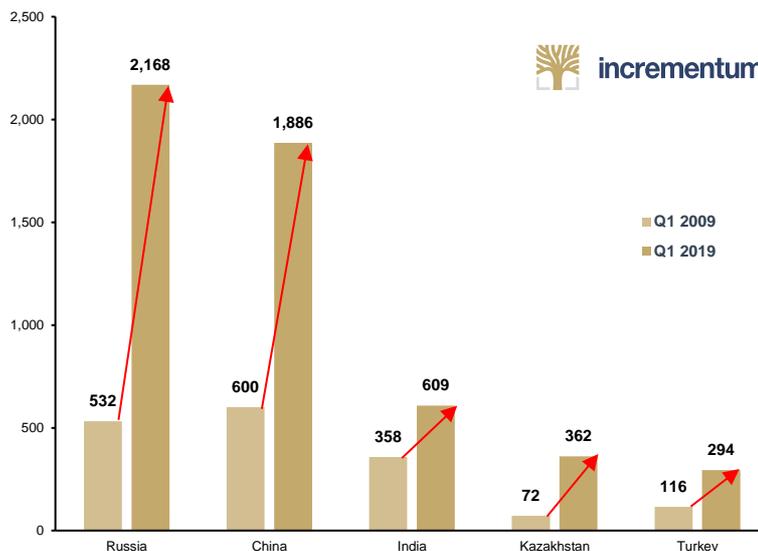
The steady buying of gold and the repatriation of central bank gold clearly indicate growing mutual distrust among central banks. Last year we took up this topic under the heading “*A turning of the tide in the global monetary architecture*”¹⁶, and this year we are again dealing with the topic of de-dollarization, which has lost none of its relevance, in a separate chapter. **The rising gold stocks of the Russian and Chinese central banks are not news to most people interested in gold.**

¹⁴ This year two chapters deal with this era of monetary history: (1) “The Relevance of John Exter”, including an interview with Barry Downs, John Exter’s son-in-law, and (2) “History Does (Not) Repeat Itself: Plaza Accord 2.0 at the Gates?”

¹⁵ Brzezinski, Zbigniew: *The Grand Chessboard: American Primacy and Its Geostrategic Imperatives*, p. 25

¹⁶ *In Gold We Trust report 2018*

Change in gold reserves of emerging countries, in tonnes, Q1/2009-Q1/2019



Source: World Gold Council, Incrementum AG

In addition to the “usual suspects”, a growing number of other central banks are currently following the example of the “axis of gold”.¹⁷ An example is the recent tenfold increase in the Hungarian gold stock. The official announcement of the Hungarian central bank on its first gold purchases since 1986 states:

“In normal circumstances, gold has a confidence-building feature, i.e. it may play a stabilising role and act as a major line of defence under extreme market conditions or in times of structural changes in the international financial system or deep geopolitical crises. In addition, gold continues to be one of the safest assets, which can be related to individual properties such as the limited supply of physical precious metal, which is not linked with credit or counterparty risk, given that gold is not a claim on a specific counterparty or country.”¹⁸

There’s nothing to add. It seems as if our Hungarian friends are attentive readers of the *In Gold We Trust* report!

We aren’t ditching the dollar, the dollar is ditching us.

Vladimir Putin

Further catalysts for emancipation from the US dollar are, among other things, the monetary and economic reprisals undertaken by the USA, which are occurring more and more obviously under the Trump administration. These include explicit sanctions, as in the cases of Russia and Iran, as well as political influence on the SWIFT payment processing system.¹⁹ Even in Germany, which is otherwise loyal to the US, for the first time voices are growing louder in favor of more self-confidence in matters of international currency policy. This is what the

¹⁷ James Rickards includes Iran, Turkey, Russia, and China. See Rickards, Jim: “[Axis of Gold](#)”, Daily Reckoning, December 20, 2016.

¹⁸ Press release: “[Hungary’s Gold Reserve Increase Tenfold, Reaching Historical Levels](#)”, Magyar Nemzeti Bank, October 16, 2018

¹⁹ See “[Die Dominanz des Dollars weckt Unmut](#)” (“The Dominance of the Dollar Arouses Discontent”), *Neue Zürcher Zeitung*, April 4, 2019

German Foreign Minister wrote in a guest article in the German *Handelsblatt* in autumn 2018:

“It is therefore essential that we strengthen European autonomy by establishing payment channels independent of the US, creating a European Monetary Fund and building an independent SWIFT system.”²⁰

And the criticism of the greenback’s currency monopoly is also gradually becoming louder on the part of the EU. In his “Speech on the State of the Union 2018”, EU Commission President Jean-Claude Juncker noted:

“It is absurd that Europe pays for 80% of its energy import bill – worth 300 billion euro a year – in US dollars when only roughly 2% of our energy imports come from the United States. It is absurd that European companies buy European planes in dollars instead of euro. [...] The euro must become the face and the instrument of a new, more sovereign Europe.”²¹

If the modern world is ancient Rome, suffering the economic consequences of monetary collapse, with the dollar our aureus, then Satoshi Nakamoto is our Constantine, Bitcoin is his solidus, and the Internet is our Constantinople.

Saifedean Ammous

Building trust in new technologies

As a consequence of the erosion of confidence in international monetary policy, new technologies are increasingly being examined with the aim of helping circumvent sanctions and achieve greater autonomy in international payments. Iran, for example, is reported to work on various blockchain projects that will make it easier to circumvent US sanctions.²² Moreover, an increasing number of private crypto projects in the gold sector are also worth mentioning in this context. The “*Turning of the Tide in Technological Progress*”, which we described in last year’s report, is thus making definite progress.²³ **However, these new technologies need to prove themselves over a longer period of time to earn trust for wider use.**

The Everything Bubble: A bubble of misguided trust

Although there is increasing evidence at the international level that confidence in the US-centric world order is crumbling, the apparent loss of confidence has so far not been reflected in either a weak US dollar or a significant rise in the price of gold (in USD). How do we explain that?

From our point of view, Donald Trump’s “all-in” economic policy contributes significantly to this. In the years following the financial crisis, global central banks flooded the economy with exorbitant monetary stimuli. Nearly 20trn USD of central bank money was created ex nihilo. Global stock markets were deliberately driven up in order to accelerate the so-called “wealth effect”. However, this did not seem to be having any effect in 2015, and stock markets began to stagger in the wake of fears of low growth.

²⁰ See Maas, Heiko: “Wir lassen nicht zu, dass die USA über unsere Köpfe hinweg handeln” (“We will not allow the United States to act over our heads”; guest commentary), *Handelsblatt*, August 21, 2018

²¹ Jean-Claude Juncker: “State of the Union 2018 - The hour of European sovereignty”, September 12, 2018

²² See “Iran in Talks With 8 Countries for Use of Cryptocurrency in Financial Transactions”, news.bitcoin.com, January 29, 2019

²³ *In Gold We Trust* report 2018

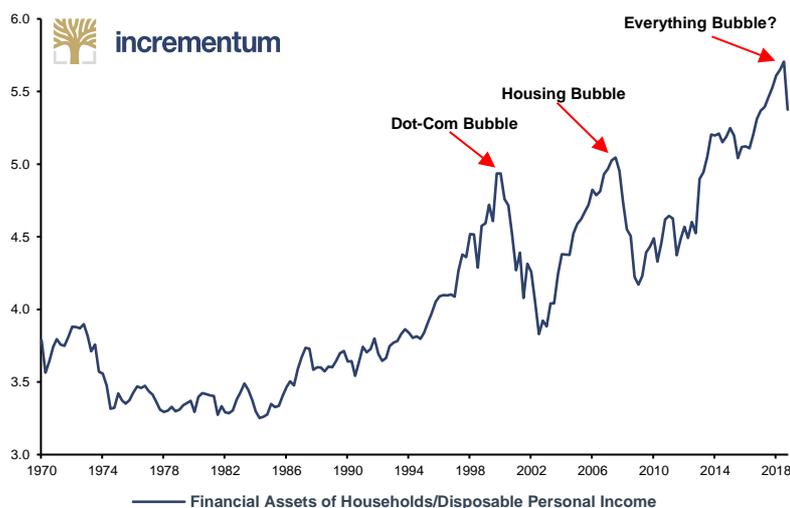


Courtesy of Hedgeye

When we recall the 2016 election year, various indicators at the time seemed to point towards an economic slowdown and approaching US recession. The gold price acknowledged the foreseeable end of economic expansion and the renewal of monetary and fiscal stimuli with its first significant rally since the bear market that began in 2011-2012. On the **fateful election night in November 2016**, however, the momentum was temporarily halted. Yields at the long end of the bond yield curve rose, allowing the Federal Reserve to implement long-awaited rate hikes in subsequent quarters without having to invert the yield curve. With the rise in interest rates, the gold rally was halted, at least for the time being.

Through massive tax relief and a change of mood on the part of many disillusioned voters, who often voted for Donald Trump because of economic dissatisfaction, the economic cycle could actually be extended once again. Not only the stock markets but also corporate bonds, luxury real estate, and works of art boomed. To describe this period, we have adopted Jesse Felder's apt term "*The Everything Bubble*".

Financial assets of households / disposable personal income, Q1/1970-Q4/2018



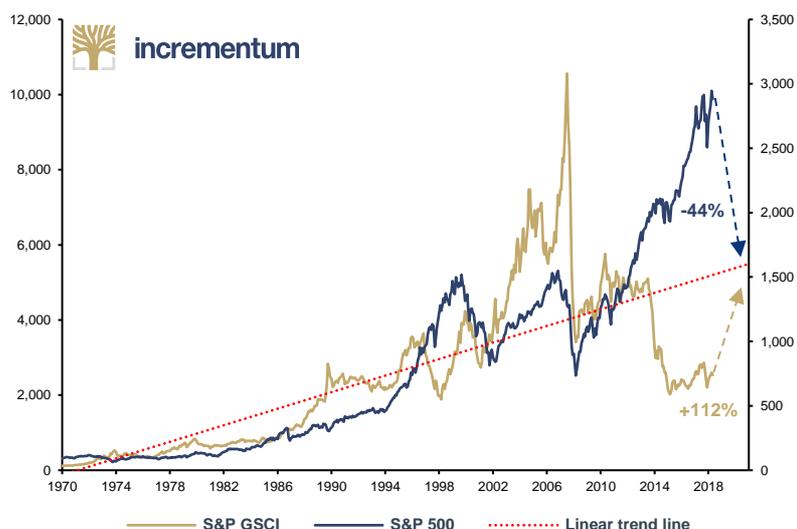
Source: Federal Reserve St. Louis, Incrementum AG

Looking for a good investment is nothing more than looking for a good bargain.

John Templeton

Alas, commodities remain the exception to the rule and still do not participate in the everything bubble. The extreme relative undervaluation of commodities compared to the stock market becomes evident in the next chart. It shows the development of the S&P GSCI and of the S&P 500, as well as their long-term upward trend line. To return to this trend line – which happens on average every 6 to 8 years – the S&P would have to fall by 44% and the GSCI to rise by 112%. This is a scenario that seems highly unlikely, if not impossible, at the moment. However, a glance at the following chart or at the history books puts this alleged impossibility into perspective.

S&P GSCI (left scale), and S&P 500 (right scale), 01/1970-05/2019



Source: Prof. Dr. Torsten Dennin, Lynkeus Capital, Bloomberg, Incrementum AG

Trade and war are opposites, trade war an oxymoron. In the century before last, the French economist Frédéric Bastiat had formulated the idea that either goods cross borders or soldiers do.

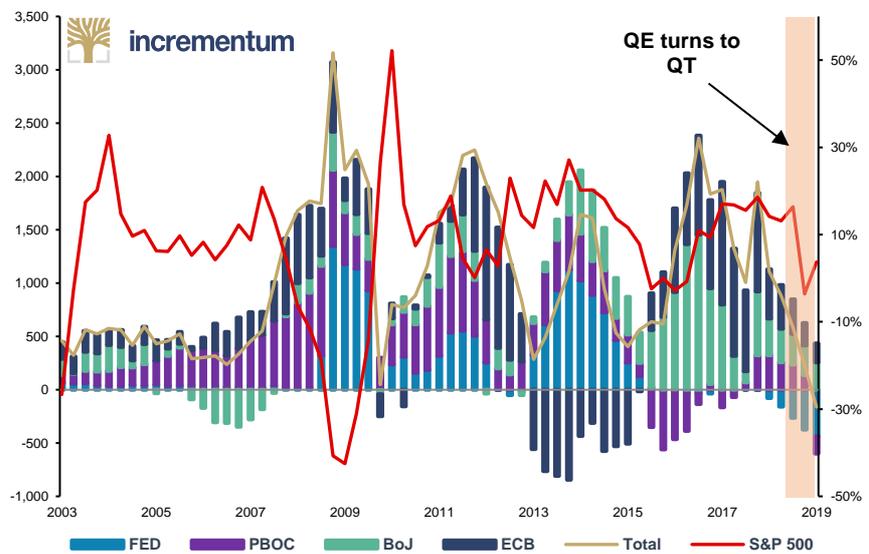
Rahim Taghizadegan

In any case, as long as the equity market party continues, trust in the credit-financed growth model seems intact. The President regularly exploits the all-time highs of US stock markets in the media, and investors and commentators praise the resurrection of the USA as a global economic locomotive. In the midst of a global economic slowdown, US consumers are being celebrated as “consumers of last resort”. Not even the permanently boiling trade conflict between China and the USA can spoil the mood of investors. **But how sustainable is such an upswing, really?**

You don’t have to look too far below the surface of economic data to be suspicious of the sustainability of the recovery. The debt increases at the governmental and, in particular, at the corporate level continue to be largely ignored. This topic is dealt with in detail in the next chapter “The Status Quo of Gold”.

Last year we therefore warned under the heading “The tide is turning in monetary policy” that the planned reduction of liquidity would inflict severe damage on the stock markets. This is exactly what happened in the fourth quarter of 2018: The stock markets suffered their biggest selloff in years and the Federal Reserve promptly announced that it would stop raising interest rates.

U-turn in monetary policy: Quarterly change in central bank balance sheet (left scale), YoY in USD bn, and S&P 500 (right scale), YoY%, 2000-2019



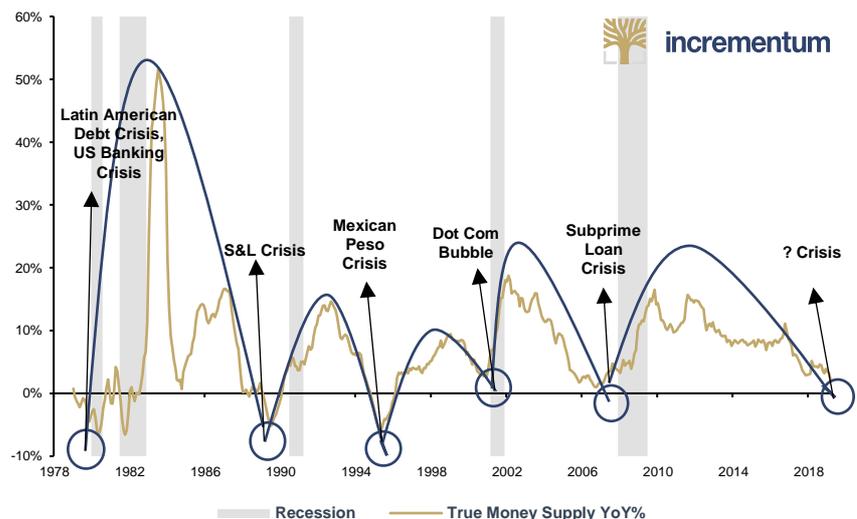
Source: Bloomberg, Incrementum AG

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

Franz Lischka

In fact, the long-announced normalization of the Federal Reserve's balance sheet via QT (quantitative tightening), which according to Jerome Powell was still running "on autopilot" in December 2018, was cancelled at the next FOMC meeting. **Once again, monetary policy was massively asymmetric: While in previous years the Federal Reserve had expanded its balance sheet by USD 3.7trn, the Federal Reserve is now expected to be able to reduce its balance sheet by only 0.7trn in total.**

True money supply, YoY%, 1979-2019



Source: Michael Pollaro, Incrementum AG

The time is coming (when) global financial markets stop focusing on how much more medicine they will get (QEs) and instead focus on the fact that it does not work.

Russell Napier

Things that can't go on forever, won't. Debts that can't be paid, won't be.

Glenn Reynolds

The pressure to print will continue to increase

Loss of confidence in monetary policy?

How long can the current boom in financial markets be perpetuated?

How long will market participants continue to trust the omnipotence of monetary authorities? When will the bubble of misguided trust burst?

For the time being, global central banks have only paused the normalization of monetary policy and not (yet) reversed it. However, it has already been communicated several times that in the event of a renewed economic slowdown, the well-known expansive means of monetary policy will be used. However, there are two major differences compared to the last time:

- Global interest rates are still at an extremely low level and would probably have to be lowered significantly into negative territory.
- A new wave of QE would clearly end any normalization efforts and seriously damage the trustworthiness of central banks.

At present, conventional risk investments such as equities are still enjoying the confidence of investors. This could change quickly if the current expansion, which has become the longest economic upswing in the history of the US, comes to an end. The fact that the coming recession could become extremely uncomfortable due to the starting position of economic fundamentals has already been expressed by many grandees of the capital market, such as Jeffrey Gundlach: *“When the next recession comes there is going to be a lot of turmoil.”*²⁴

The closer the upcoming presidential elections come, the greater the pressure on the Federal Reserve from the Trump administration not to stall the upswing and to reopen the monetary floodgates. President Trump has cleverly positioned himself in the media by repeatedly criticizing the Federal Reserve for interest rate hikes and quantitative tightening. If there is serious economic slowdown, he will be able to pass the buck to the central bank and adorn himself with a false mantle of economic competence, especially if the Fed does not immediately implement the appropriate measures that he will propose. But as can be seen on the following chart, Federal Reserve and ECB – relative to the BoJ – seem to have plenteous leeway to further increase their balance sheets.

²⁴ See [Interview with Jeffrey Gundlach](#), Yahoo!Finance, February 13, 2019

Federal Reserve balance sheet, ECB balance Sheet, & BoJ balance sheet as % of GDP, BoJ leading 10 years



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

MMT is the post hoc justification of both easy fiscal policy and easy monetary policy. As such, it is the new intellectual darling of every political and market Missionary of the Left AND the Right.

Ben Hunt

But the independence of the Federal Reserve will also be increasingly tested by the opposition Democrats. The left wing of the party is strengthening and increasingly flirting with questionable monetary experiments that usually start with the buzzword MMT (“Modern Monetary Theory”).²⁵ A Democratic victory in next year’s presidential election could bring on the perfect storm for the US economic model, which has so far been able to maintain a good mood among investors and the general perception of a humming economy through stock price inflation. All this could change abruptly with a political leftward slide. We will report on this potential in detail in the coming election year.

In any case, our decision to link our four-year price forecast to the US President’s term was the right one, because the expanding interventionist measures and indirect and direct influence on monetary policy are obviously increasingly interlinking policy with the financial markets. **Our updated scenarios and forecast can be found in the conclusion of this year’s *In Gold We Trust* report, “Quo Vadis, Aurum?”**

In Gold We Trust

Popular trust in the idea that monetary policies can sustain growth and employment and that central banks have inflation under control will be seriously tested in the next recession. The spread of the loss of trust to other pillars of the Western world, such as the media, the financial system, and the judiciary could have devastating consequences.

²⁵ Evil tongues also speak of the **Magical Money Tree**.

The truth is often forced to a long sleep, but when it awakens, its illuminating light reaches into the last dark chambers of error and ignorance.

Roland Baader

*If it not be now, yet it will come.
The readiness is all.*

Hamlet

When it comes to trust in specific investments, our vote – at least for a portion of the portfolio – is clear. Trust looks to the future, forms itself in the present, and feeds itself from the past. As monetary asset, gold can look back on a successful five-thousand-year history in which it was able to maintain its purchasing power over long periods of time and never became worthless. Gold is the universal reserve asset to which central banks, investors, and private individuals from every corner of the world and of every religion and every class return again and again.

One thing should not go unsaid at this point: If our diagnosis is correct and trust is generally on the decline, this does not necessarily have to be negative. Although many of the developments we have noted should be regarded as worrying, we must not forget that trust levels in a society follow a cyclical pattern. Disappointment with familiar institutions may well allow the laying of the cornerstone for a more solid foundation in the future.

Gold looks to a future in which the natural value of this unique precious metal is once again fully appreciated. In our opinion, the currently high trust granted into the skills of central bankers and the supposed strength of the US economy are the main reasons for the somewhat weak development of the yellow metal. If the omnipotence of the central banks or the credit-driven record upswing are called into question by the markets, this will herald a fundamental change in global patterns of thinking and help gold to old honors and new heights.

Now we invite you to our annual tour de force and hope that you enjoy reading our 13th *In Gold We Trust* report as much as we enjoyed writing it.

Yours truly,



Ronald-Peter Stoeferle and Mark J. Valek

P. S. All previous issues of the *In Gold We Trust* report can be found in our [archive](#).



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The Status Quo of Gold

“Gold’s Perfect Storm investment thesis argues that gold is at the beginning of a multiyear bull market with ‘a few hundred dollars of downside and a few thousand dollars of upside’.

The framework is based on three phases: testing the limits of monetary policy, testing the limits of credit markets, and testing the limits of fiat currencies.”

Diego Parilla

Key Takeaways

- Last year gold rallied in most currencies with the notable exception of USD, CHF and JPY.
- Since the euro was introduced as book money 20 years ago, the gold price in EUR has risen by 356%, or on average 7.8% per year.
- Despite the interim stock crash in Q4/2018 gold has never been so cheap compared to stocks in more than 50 years.
- How solid the US economic foundation – and thus the US dollar – really is will only become apparent in the next crisis. We are convinced that the boundless trust in the US economic engine and the US dollar might begin to crumble in the coming months.
- Central banks remain net buyers. Investor demand will be the pointer on the scales for the gold price.
- The high share of BBB-rated corporate bonds is a potential risk to the stability of the US financial markets and could endanger future economic growth in the US.

We want to begin this year's *In Gold We Trust* report with our traditional assessment of the gold market. We will take a critical look at the trend of the gold price and analyze whether we really are – as we asserted last year – in the early stages of a new bull market, or whether our fundamental conclusions turned out to be flawed.

Status Quo of Gold in the Currency Context

“Like gold, U.S. dollars have value only to the extent that they are strictly limited in supply. But the U.S. government has a technology, called a printing press (or, today, its electronic equivalent), that allows it to produce as many U.S. dollars as it wishes at essentially no cost.”

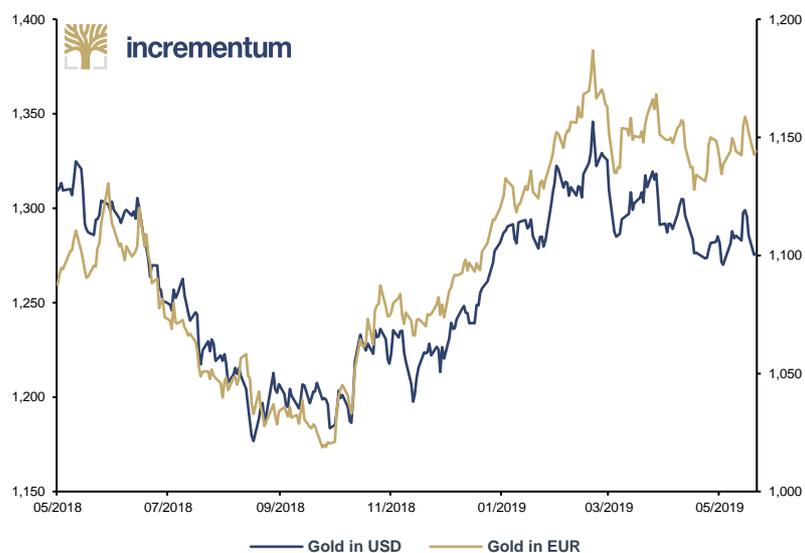
Ben Bernanke

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 consider some important performance data. **In USD terms gold generated an unsatisfactory return in 2018, declining by 2.1%, while it gained 2.7% in euro terms.** The development was very different in the two halves of the year. While the gold price briefly (intraday) crossed the USD 1,400 mark in January 2018, the price then slid to USD 1,180 in August. A “panic low” was reached, after which a rally began, which brought significantly higher price levels of up to USD 1,300 at the end of the year. All in all, this was a remarkable development, especially considering the fact that the DXY was up 4.3% in 2018. On a EUR basis, developments were somewhat less volatile, with the gold price oscillating within a range of just under EUR 90.

Gold price since the last In Gold We Trust report, in USD (left scale) and EUR (right scale), 05/2018-05/2019

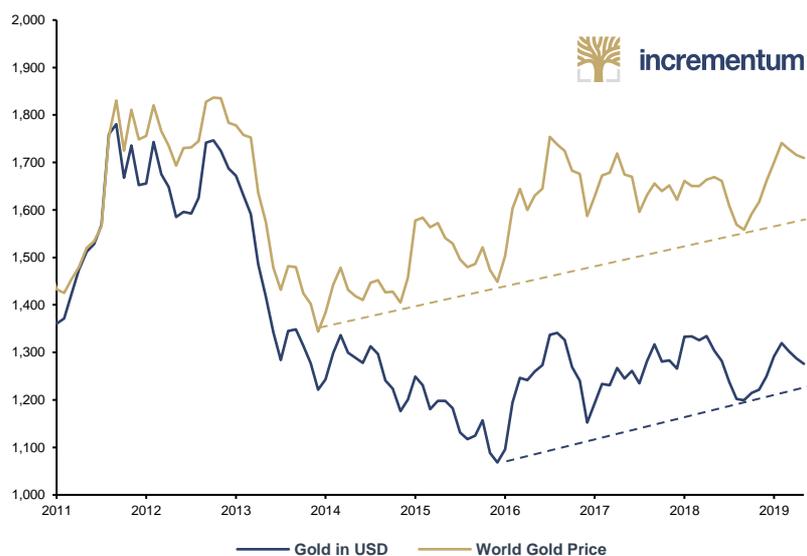


Source: Federal Reserve St. Louis, Incrementum AG

The world gold price is close to its all-time highs!

The next chart is one of the classics of every *In Gold We Trust* report. It shows the so-called world gold price, which represents the gold price not in US dollars or euros but as a trade-weighted US dollar. A glance at the chart shows that the world gold price is now not too far from its October 2012 high of 1,836 USD (monthly average). If one compares the world gold price with the gold price in US dollars, one can see that the spread between them has tightened somewhat since 2017. Since bottoming at the end of 2015, the gold price has begun to establish a series of higher lows, which confirms our essentially positive assessment.

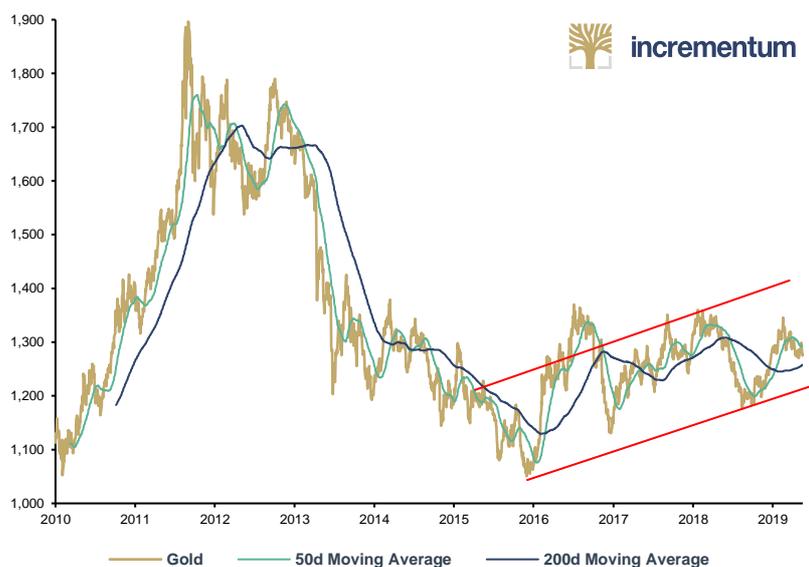
World gold price, and gold price in US dollars, 01/2011-05/2019



Source: Federal Reserve St. Louis, Incrementum AG

Let us look at the gold price trend since 2010. It is evident that the gold price has recently declined below its 50-day moving average. On the other hand, the 200-day moving average is still not breached and looks like a reliable support level, at least for now.

Gold in USD, 50- and 200-day moving averages, 01/2010-05/2019



Source: Federal Reserve St. Louis, Incrementum AG

The role of the U.S. dollar as the world's reserve currency ought to give the Fed a triple mandate: Dollar strength can cause havoc for a world swimming in a pool of dollar-denominated debt.
Yra Harris

Now we want to widen the currency spectrum and look at the gold price in the most important currencies. **2018 as a whole was positive for gold in most world currencies. Only the (supposed) safe-haven currencies (USD, CHF, JPY) recorded (slight) losses.** The average performance in this secular bull market remains impressive. The average annual performance 2001 to now is 9.1%. **Despite significant corrections, gold was able to outperform virtually every other asset class and above all every other currency during this period.** Since the beginning of 2019, the development has been relatively unspectacular. The average plus is 0.8%.

Gold Performance since 2001 in various currencies (%)

	EUR	USD	GBP	AUD	CAD	CNY	JPY	CHF	INR	Average
2001	8.1%	2.5%	5.4%	11.3%	8.8%	2.5%	17.4%	5.0%	5.8%	7.4%
2002	5.9%	24.7%	12.7%	13.5%	23.7%	24.8%	13.0%	3.9%	24.0%	16.2%
2003	-0.5%	19.6%	7.9%	-10.5%	-2.2%	19.5%	7.9%	7.0%	13.5%	6.9%
2004	-2.7%	5.3%	-2.3%	1.8%	-1.9%	5.3%	0.7%	-3.4%	0.6%	0.5%
2005	36.8%	20.0%	33.0%	28.9%	15.4%	17.0%	37.6%	37.8%	24.2%	26.1%
2006	10.6%	23.0%	8.1%	13.7%	23.0%	19.1%	24.3%	14.1%	20.9%	17.2%
2007	18.4%	30.9%	29.2%	18.3%	12.1%	22.3%	22.9%	21.7%	16.5%	21.7%
2008	10.5%	5.6%	43.2%	31.3%	30.1%	-2.4%	-14.4%	-0.1%	28.8%	15.5%
2009	20.7%	23.4%	12.7%	-3.0%	5.9%	23.6%	26.8%	20.1%	19.3%	16.5%
2010	38.8%	29.5%	34.3%	13.5%	22.3%	24.9%	13.0%	16.7%	23.7%	25.2%
2011	14.2%	10.1%	10.5%	10.2%	13.5%	5.9%	4.5%	11.2%	31.1%	11.2%
2012	4.9%	7.0%	2.2%	5.4%	4.3%	6.2%	20.7%	4.2%	10.3%	7.5%
2013	-31.2%	-28.3%	-29.4%	-16.2%	-23.0%	-30.2%	-12.8%	-30.1%	-18.7%	-24.1%
2014	12.1%	-1.5%	5.0%	7.7%	7.9%	1.2%	12.3%	9.9%	0.8%	6.2%
2015	-0.3%	-10.4%	-5.2%	0.4%	7.5%	-6.2%	-10.1%	-9.9%	-5.9%	-3.8%
2016	12.4%	9.1%	30.2%	10.5%	5.9%	16.8%	5.8%	10.8%	11.9%	12.3%
2017	-1.0%	13.6%	3.2%	4.6%	6.0%	6.4%	8.9%	8.1%	6.4%	6.3%
2018	2.7%	-2.1%	3.8%	8.5%	6.3%	3.5%	-4.7%	-1.2%	6.6%	2.6%
2019 ytd	3.6%	-0.2%	-0.1%	2.3%	-1.9%	0.2%	0.7%	2.8%	-0.2%	0.8%
Average	8.6%	9.6%	10.8%	8.0%	8.6%	8.4%	9.2%	6.8%	11.6%	9.1%

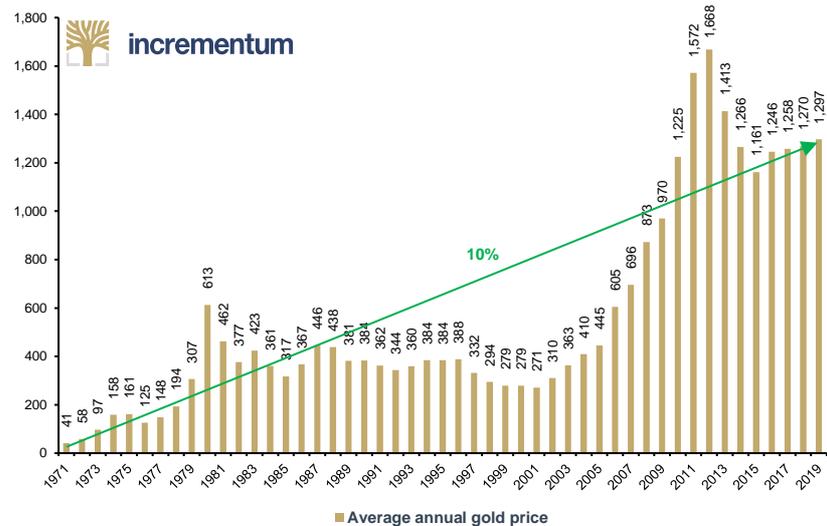
Source: Federal Reserve St. Louis, Goldprice.org, Incrementum AG, as of May 21st 2019

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

But let's turn back a little further in the history books. Since August 15, 1971 – the beginning of the new monetary era – the annual rate of increase of the gold price in US dollars has been 10%. The inflation-adjusted appreciation of the currency gold against the US dollar averages 4.5% per year. This long-term context puts the correction of the years 2013-2015 into perspective, as the following chart of average annual prices shows. **The chart also provides impressive evidence that it is advisable to regularly accumulate gold (“gold saving”) by harnessing the cost-average effect.**

Average annual gold price, in USD, 1971-2019



Source: Federal Reserve St. Louis, Incrementum AG

Loyal readers know: We believe that commodities are the antidote to the US dollar. There are interactions between movements in commodity prices and the US dollar, with the causality emanating more strongly from the US dollar than is generally assumed. This can also be explained by the crisis in the USD-centric global currency architecture, which we will discuss in detail again in the chapter “De-Dollarization”.

Gold, in the end, is not just competition for the dollar; it is competition for bank deposits, stocks and bonds most particularly during times of economic stress.

Paul Volcker

In our opinion, the indications of future weakness of the US dollar are slowly but surely increasing. The deliberate weakening of one's own currency in the context of trade wars in order to support the export economy seems particularly worth mentioning here. It is no surprise to us that President Trump recently increased verbal pressure on the Federal Reserve: *“We have a gentleman that likes raising interest rates in the Fed; we have a gentleman that loves quantitative tightening in the Fed; we have a gentleman that likes a very strong dollar in the Fed.”*²⁶

The consensus seems to be that a strong US dollar automatically means lower gold prices. This thesis can also be empirically substantiated. **However, our quantitative analyses show that the correlation is clearly asymmetrical:**

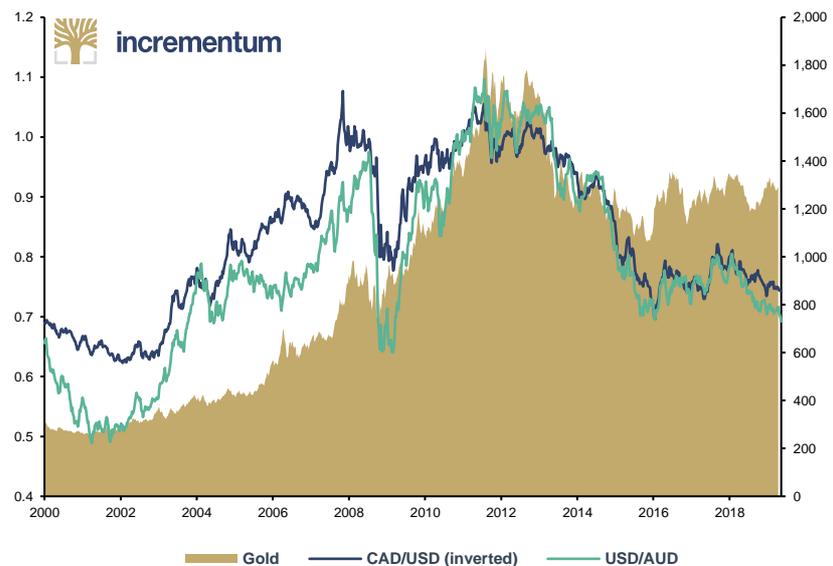
²⁶ “Trump Says Dollar Too Strong in Renewed Criticism of Powell”, Bloomberg, March 2, 2019

A strong US dollar does much less damage to the gold price than a weak US dollar does to gold.²⁷

Moreover, it seems that historical patterns are currently changing. In our opinion, the “autonomous rate of increase”, i.e. the rate of gold price increase that is independent of exchange-rate fluctuations, will continue to rise. One of the reasons for this is that the influence of emerging markets on gold demand has grown significantly in recent years. In this respect, the historically inverse relationship between the US dollar and the gold price could weaken in the future. **What’s good for the US dollar doesn’t always have to be bad for gold.**

The AUD/USD and CAD/USD currency pairs are known to be particularly commodity- and inflation-sensitive. The following chart shows the high correlation between these currencies and the gold price. **It is also important to note that gold is currently close to its all-time high in both currencies.**

CAD/USD and AUD/USD (left scale), and gold in USD (right scale), 01/2000-05/2019



Source: Federal Reserve St. Louis, Incrementum AG

Like Liberty, gold never stays where it is undervalued.

John S. Morrill

Gold always moves out of countries whose capital stock is declining and flows into countries where capital accumulation is taking place, the economy is prospering, and the volume of savings is increasing.²⁸

The Romans had already realized this more than 2,000 years ago, when the Chinese and Indians accepted only gold and not Roman goods in exchange for spices and silk.

²⁷ See “The Link Between Gold and the Dollar”, *In Gold We Trust* report 2015

²⁸ See “The Long Monetary March”, Myrmikan Update, September 17, 2013; updated on September 23, 2013

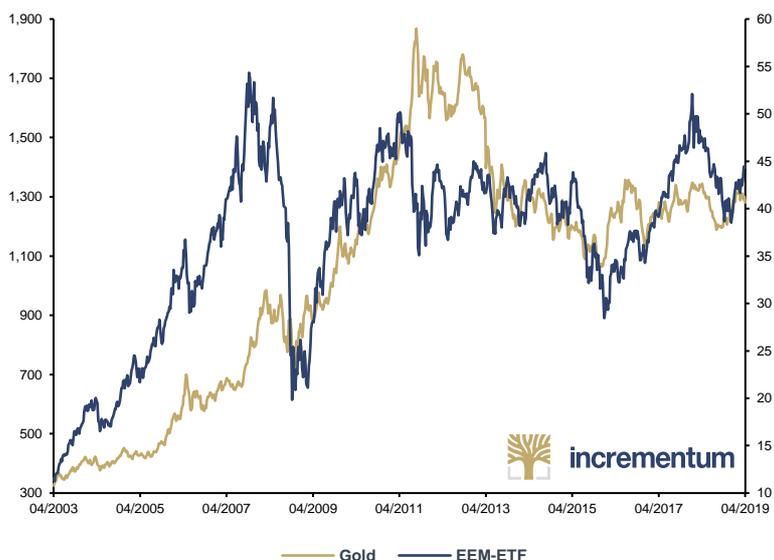
Gold goes where the money is, and it came to the United States between World Wars I and II, and it was transferred to Europe in the postwar period. It then went to Japan and to the Middle East in the 1970s and 1980s, and currently it is going to China and also to India.

James Steel

In 2020, 50% of world GDP will be generated by emerging economies, compared with only 19% in 2000. As we have described in detail in previous years, the majority of emerging markets have a much greater penchant for gold than the industrial nations.²⁹ This should translate into a natural, long-term growth of gold demand. The share of emerging markets in total gold demand has risen to 70% over the past five years, as measured by annual gold flows. **China and India accounted for more than half of this figure. The formative historical experience of financial repression, an unstable monetary system, and the associated loss of purchasing power are – apart from cultural and religious aspects – likely to be the decisive factors for the higher basic demand for gold.**

The following chart shows impressively how tight the correlation between the economic development of the emerging markets, as measured by the EMM ETF,³⁰ and the gold price is. Naturally, the US dollar trend plays a central role not only for gold but also for the development of the emerging markets, i.e. a weak dollar usually favors the development of the emerging markets and vice versa.

Gold price, in USD (left scale), and EEM ETF (right scale), 04/2003-04/2019



Source: investing.com, Incrementum AG

The 20th anniversary of the introduction of the euro as book money gives us an opportunity to take a closer look at performance over this period. Since the euro was introduced as book money on January 1, 1999, the price of gold in euros has risen by 367%, or on average 7.8% per year.

²⁹ See "The Portfolio Characteristics of Gold", *In Gold We Trust* report 2018

³⁰ EEM – iShares MSCI Emerging Markets ETF

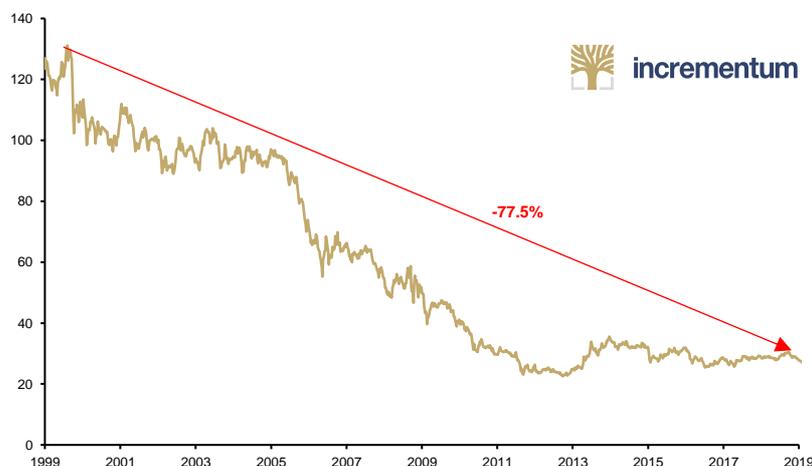
Gold price, in EUR, 01/1999-05/2019



Source: World Gold Council, Incrementum AG

The dramatic loss of purchasing power of the euro against gold is even more impressive if depicted as an inverse. The next chart shows how many milligrams of gold correspond to one euro. **Whereas on January 1, 1999 one euro “contained” 124.8 mg of gold, 20 years later the figure was only 28.3 mg. This corresponds to a loss of 77.5 % in the value of the euro against gold.**

Gold per EUR, in mg, 01/01/1999-01/01/2019



Source: Federal Reserve St. Louis, Incrementum AG

Conclusion

The whole world seems to be looking exclusively at the gold price in US dollars. The whole world? No, we have looked at the large number of currencies in which the gold price is already close to its all-time high. It is incomprehensible to us that even in the eurozone the price of gold in US dollars enjoys more media attention than the price of gold in euros, and that therefore the considerable gains of gold in euros fall by the wayside, making gold appear much less attractive than it actually is for the euro investor.

Money is perhaps the most concentrated and acute form and expression of trust in the social-state order.

George Simmel

We are therefore sticking to our statement from last year that gold is in the early stages of a new bull market – a bull market that could soon pick up momentum on a US dollar basis as well.

Status Quo of the US Dollar and the US Economy

“The US dollar now feels like a stock that no longer rises on good news.”

Gavekal

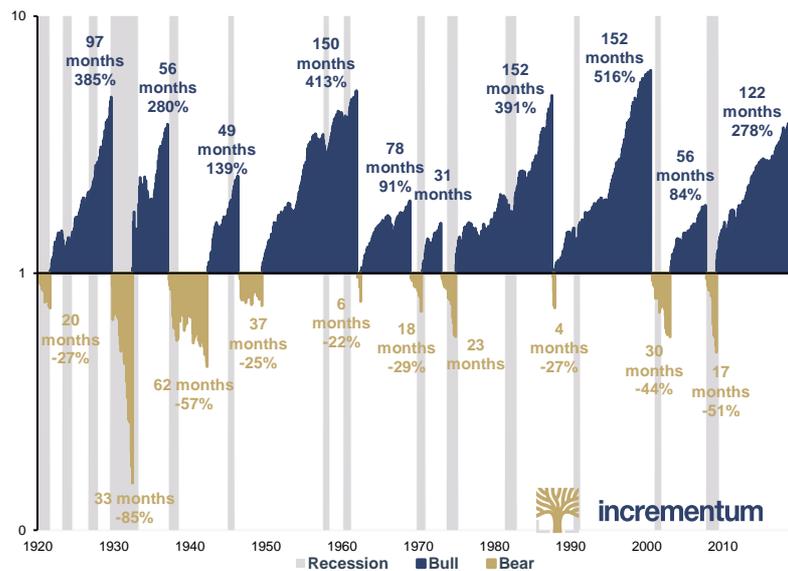
All too often, media coverage conveys the impression that Europe, China, and Japan lie in (economic) ruins, while the US as the only haven of prosperity stands like a lighthouse over the gloomy economic landscape everywhere else. This shows what high expectations the rest of the world has of the US and that despite all the prophecies of doom and challenges it faces, the US continue to be regarded as the undisputed global economic locomotive.

The world is dangerously overweight American assets. The cleanest-shirt-in-the-laundry basket has finally begun to smell like the rest of the dirty pile. If you are going to wear something, at least pick something that has been sitting at the bottom.

Kevin Muir

On the face of it, the starting position in the US appears to be undoubtedly good. Very good, in fact: Unemployment has fallen to its lowest level since 1968, the Federal Reserve has increased its monetary policy leeway by implementing nine rate hikes and QT, the construction sector is booming, commercial banks have been able to increase their profits much more strongly than European banks, and the stock market is rushing from one all-time high to the next. **At 122 months and a total increase of 278%, the current bull stock market is one of the longest and strongest in US history, as the following chart shows. Indeed, confidence and trust in the US economy and the US stock market seem to know no limits at the moment.**

S&P 500 bull and bear markets, 01/1920-05/2019



Source: Bloomberg, Robert Shiller, Incrementum AG

Let us now turn to the US dollar and its recent trend. At first glance, the dollar seems to be showing its muscle and thus confirming the strength and stability of the US economy. Apart from a pronounced phase of weakness in 2017, the DXY has moved in only one direction since the end of 2011: upwards.



Courtesy of Hedgeye

Therefore, there are also numerous proponents of a strong US dollar thesis among the gold bulls. Among them is our esteemed colleague Brent Johnson, who makes the following arguments in favor of a stronger greenback:³¹

- **Capital flows to the US as a consequence of global economic cooling and the high interest rate differential:** The US dollar remains the safe-haven currency of choice in the event of a political or economic crisis.
- **11trn USD in foreign debt:** De facto the whole world has a shortage of US dollars. Since these countries can only repay their debts in US dollars, devaluation of their own currencies leads to an increase in the real value of

³¹ We recommend the presentation "[The Dollar Milkshake Theory](#)", by Brent Johnson.

their USD-denominated debt, which in turn spurs greater demand for US dollars.

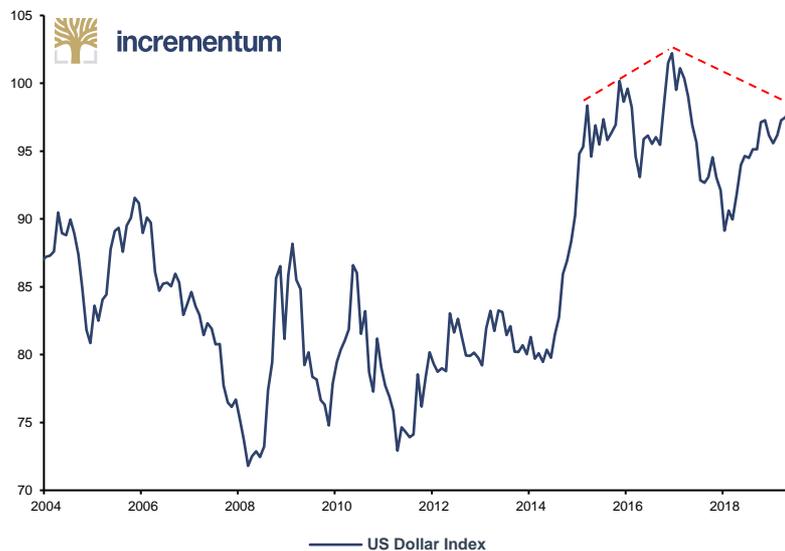
- **Elections to the EU Parliament:** If populist candidates continue to gain votes, this anti-establishment movement could undermine confidence in the euro.
- **Raising the US debt ceiling:** Raising the debt ceiling is bad for the dollar in the long run. But in the short run it means that the biggest buyer in the world (the US government) is buying dollars from the market and crowding others out from an increasingly tight supply.

News is not important. It is the way the market reacts to the news that is important.

Joseph E. Granville

However, for reasons that we will describe on the following pages, we tend to be in the dollar-bearish camp. In view of these reasons and given the numerous economic, political, and social trouble spots in the EU – Brexit, Italy’s open rebellion against the Stability and Growth Pact (SGP), the yellow vest protests in France, the economic slowdown in Germany – it is remarkable how little the USD has appreciated. In 2018 the DXY strengthened by just 4.3% and has oscillated between 95 and 98 since the beginning of the year. Looking at the monthly chart of the DXY Index, we can see that a SHS formation might be in the making.

US Dollar Index (DXY), in points, 01/2004-05/2019



Source: Federal Reserve St. Louis, Incrementum AG

Time takes everybody out; time’s undefeated!

Rocky Balboa

A further indication that the US dollar could slowly but surely lose its status as a classic safe-haven currency is the fact that in the course of the sharp correction of the stock markets in Q4/2018 the greenback strengthened only marginally.³² **We regard this as a prime indication of a US dollar bear market, whose**

³² See also chapter 4 “De-Dollarization: Europe Joins the Party”

starting signal has not yet been apprehended by the majority of investors.

DXY, gold, and S&P 500, price performance in %, 2000-2018

Period of dollar weakness	DXY	Gold	S&P 500
06.02.2002–23.07.2008	-26.85%	221.71%	14.74%
11.03.2009–02.12.2009	-12.56%	27.39%	60.23%
26.05.2010–27.07.2011	-11.06%	36.94%	25.17%
28.12.2016–31.01.2018	-10.14%	17.86%	25.11%

Source: Euro Pacific Capital, Incrementum AG

Last year we asked the crucial question: *What will happen to the US dollar if the current Goldilocks scenario is called into question, recession concerns arise, and the Federal Reserve is forced to reverse its monetary policy?*

I want a dollar that does great for our country, but not a dollar that's so strong that it makes it prohibitive for us to do business with other nations and take their business.

Donald Trump

From our point of view, the US dollar is already discounting future economic weakness. The economic situation in the USA still seems to be on the sunny side, but the picture has already clouded over the past few months. The following table shows the relationship between the average change during an expansion phase and the change in the current cycle, showing how far we have progressed in the current cycle. **The US economy appears to be in the ninth inning.**

Ratio of the average changes in economic variables in economic expansions vs. changes in the current cycle

Variable	Average change in expansions (start to peak/trough)	This cycle	Percent of average recovered this cycle
Core CPI (bps)	82.0	60.0	73.2%
CRB Commodity Index (%)	37.0%	48.2%	100.0%
2s/10s Yield Curve (bps)	-183.0	-209.0	100.0%
Industry Capacity Utilization Rate (ppts)	9.0	12.9	100.0%
Unemployment Rate (ppts)	-2.9	-5.7	100.0%
Real GDP (ppts)	8.9	7.8	87.6%
Profit Margins (ppts)	3.9	5.6	100.0%
ISM Manufacturing (pts)	25.0	15.0	60.0%
Auto Sales (%)	56.0%	85.8%	100.0%
Housing Starts (%)	63.5%	128.5%	100.0%
Cyclical GDP Share (ppts)	3.2	4.3	100.0%
Trailing P/E Multiple (pts)	7.8	9.1	100.0%
High Yield Spread (bps)	-662.7	-817.7	100.0%
Employment-to-Population Ratio (ppts)	2.5	1.0	40.3%
Consumer Confidence (pts)	43.9	80.7	100.0%
Average			90.7%

Source: Haver Analytics, Gluskin Sheff, Incrementum AG

We are prepared for a recession. We're not predicting a recession. We're simply pointing out that we are very conscious about the risks we bear.

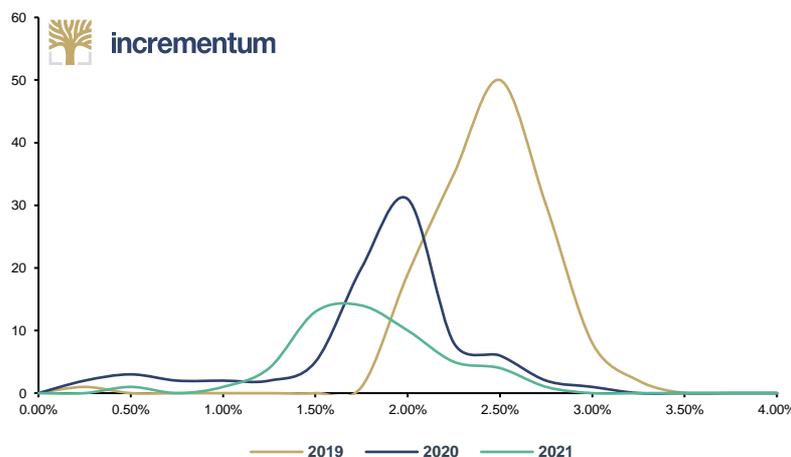
Jamie Dimon

Over the past 100 years, the US economy has fallen into recession on average every six and a half years. More than ten years have now passed since the last recession, and yet the mainstream does not expect an immediate economic downturn in the foreseeable future, but only in the next 2-3 years. In view of the almost limitless hubris, the surprise potential appears to be clearly asymmetrical. Last year we wrote in a sarcastic way: *“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.”*³³

Compared to last year, there has been a slight change of perception, but a recession still seems less likely to the market consensus than the San Francisco 49ers bouncing back next year to win the Super Bowl.

Of 87 analysts surveyed by Bloomberg, not a single one currently expects US GDP to contract in 2019, 2020, or 2021.³⁴ The expected median and average growth in these three years is between 1.8% and 2.4%. Compared to the previous year, however, growth expectations have already declined slightly (from 2.1%-2.8%).

Expected real economic growth 2019/2020/2021 in % (x-axis), number of analysts (y-axis)



Source: Bloomberg, Incrementum AG

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

The rather poor forecasting ability with regard to recessions has recently been confirmed by numerous studies: According to a study by Fathom Consulting, the IMF has correctly predicted only 4 (!) of 469 downturns since 1988. Since 1988, the IMF has never predicted a recession in an industrialized country with a time lead of more than a few months.³⁵ An IMF

³³ See [“White, Grey and Black Swans”](#), *In Gold We Trust* report 2017

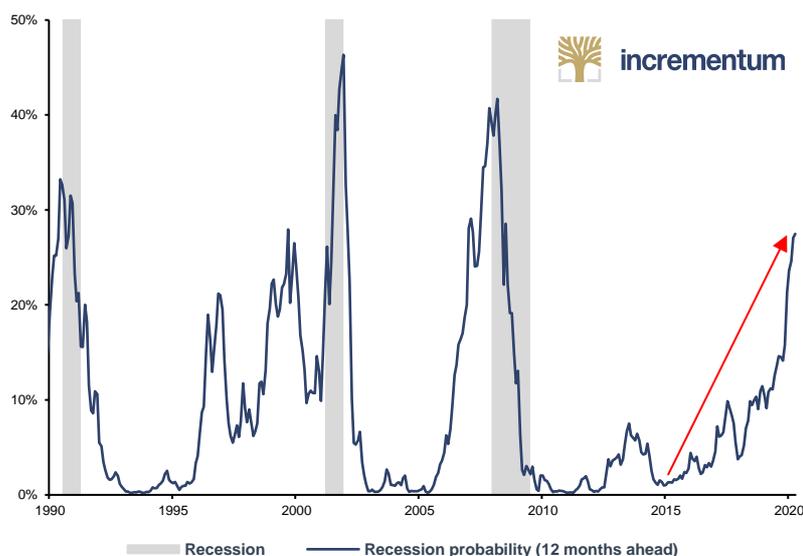
³⁴ By the way, NO analyst expected a recession in 2007 either!

³⁵ See Bridgen, Andrew: [“The economist who cried wolf?”](#), *A sideways look at economics*, Fathom Consulting, February 1, 2019

working paper found that out of 153 recessions in 63 countries, only five were forecast by a consensus of private economists in April of the previous year.³⁶

Meanwhile, however, it appears that signals of a US recession are slowly increasing. For example, the Federal Reserve’s recession indicator currently indicates a recession probability of 27.5% for April 2020.³⁷ In the past 30 years, this figure has never been so high if there was no recession in the following two months.

US recession probability, in %, 01/1990-04/2020e



Source: Federal Reserve New York, Incrementum AG

Historically the inversion of the yield curve has been a good sign of economic downturns, but this time it may not.
Ben Bernanke

The best track record for recession forecasts is clearly to be found in the yield curve. A study recently published by the San Francisco Federal Reserve shows that inverse yield curves have announced most recessions since the 1950s.³⁸ The logic behind that fact is the following: In anticipation of an economic



Courtesy of Hedgeye

³⁶ An, Zidong, Jalles, João Tovar and Loungani, Prakash: "How Well Do Economists Forecast Recessions?", *IMF Working Paper*, No. 18/39, March 5, 2018

³⁷ The exact methodology of the recession indicator can be found [here](#).

³⁸ See Bauer, Michael D. and Mertens, Thomas M: "Economic Forecasts with the Yield Curve", *FRBSF Economic Letter*, March 5, 2018

downturn, investors reduce their demand for short-term bonds and shift their demand to longer-term bonds, whose prices thus rise and whose yields fall even further compared with short-term bonds. For its part, the declining demand for short-term bonds raises interest rates at the short end. **The next graph shows this intertemporal allocation shift in an inverse yield curve with a negative slope.**

Interest spreads on benchmark US government bonds, in % (left scale), and gold price, in USD (log, right scale), 01/1982-04/2019



Source: Federal Reserve St. Louis, Incrementum AG

It's not a matter of if; it's a matter of when. And I could be early on the call as I was back in 2007, but I am suggesting that, if you don't open the umbrella, just make sure you have one on you.

Dave Rosenberg

From an empirical point of view, the narrowing of interest spreads is typically followed by an economic downturn and then by the appreciation of gold. Especially since the Nixon shock in 1971, this chronological sequence can be regularly observed. **The current structure of the yield curve inevitably raises the question of whether the stability of the banking and credit sector is at risk in the current refinancing carousel and whether systemic risks may not be on the rise.**

The longing for negative interest rates

The world has largely exhausted the scope for central bank improvisation as a growth strategy.

Larry Summers

But what will happen this time, if even more evidence of an impending recession turns up? The last two recessions, in 2000 and 2008, prompted the Federal Reserve to cut interest rates by 550 and 525 basis points respectively, and in the nine recessions since the mid-1950s by an average of 550 basis points. Former US Treasury Secretary Larry Summers also considers a 500-basis-point margin to be absolutely necessary to effectively combat a recession.³⁹

At the moment the fed funds rate stands at 2.25-2.50%. The potential for interest rate cuts thus appears to be severely limited, unless one were to turn to the last resort of imposing negative interest rates. Kenneth Rogoff makes this point

³⁹ See "Summers Warns the Biggest Economies Are Not Prepared for Another Recession", Bloomberg, June 18, 2018

We are experiencing a growth period that has already lasted for a long time in the USA. So we will inevitably have a recession in the foreseeable future. The major central banks have shot their powder through their ultra-loose monetary policy, which was necessary in the crisis. There's hardly any room for manoeuvre to counteract the downturn.

Jean-Claude Trichet

unequivocally: “One day we will get a new severe financial crisis, and then we could need negative interest rates of minus six or minus five percent to get out of the crisis quickly.”⁴⁰

This is all the more true for the ECB, which has not been able to raise interest rates even once and has no room for manoeuvre with interest rate cuts, at least as long as negative rates are not widely enforceable.

The highly indebted euro countries made no use of the time dearly bought by the ECB and implemented hardly any structural reforms that were unpopular with their electorates. This situation is unlikely to change, given the recent election results. So there is every reason to suggest that Mario Draghi will set a new, sad record. He will go down in history as the first president of the ECB during whose term of office interest rates were increased a single time. On October 31, 2019, the very day on which the second Brexit extension expires, Draghi will close the door to his Frankfurt office for the last time.

As an attentive observer of central bank communications, we realize that the consensus is moving more and more in the direction of new aggressive central bank measures. Here some are current examples:

- [“Brainard: Fed should consider targeting longer rates in a future downturn”](#), Reuters, May 8, 2019
- [“Trump calls on Fed to cut rates by 1% and urges more quantitative easing”](#), CNBC, April 30, 2019
- [“White House economic advisor Larry Kudlow says Fed should still cut rates despite 3.2% GDP growth”](#), CNBC, April 26, 2019
- [“Fed may need to buy more bonds than before crisis to manage U.S. rates: Fed official”](#), Reuters, 18 April 2019
- [“Dimon: JPMorgan Chase ‘prepared for’ but not predicting a recession”](#), Yahoo Finance, April 4, 2019
- [“Central banks must turn to global financial crisis tool box to tackle the next recession, says Fed’s Rosengren”](#), South China Morning Post, March 26, 2019
- [“Fed’s Williams says in a downturn we could consider quantitative easing, negative rates”](#), Tweet from Jennifer Ablan (Reuters), March 6, 2019
- [“Negative Rates Would Have Sped Up Economic Recovery, Fed Paper Says”](#), WSJ, February 4, 2019⁴¹

In our opinion, the fact that the Federal Reserve has recently cited and positively mentioned research on negative interest rates so frequently is a first step towards implementing this policy.

The question of what a central bank should do if it no longer has any room for manoeuvre downwards, but a cut in interest rates seems necessary, is topical as never before. In economic theory, the interest rate floor of zero percent is known by the term “zero (nominal) lower bound”. For the longest time, this limit was considered impenetrable by monetary policy. If the

⁴⁰ “Star-Ökonom für Minuszinsen von bis zu sechs Prozent” (“Star economist for negative interest rates of up to six percent”), welt.de, September 18, 2016, our translation

⁴¹ The WSJ article refers to the following publication: “How Much Could Negative Rates Have Helped the Recovery?”, FRBSF Economic Letter, Federal Reserve Bank of San Francisco, February 4, 2019



Courtesy of Hedgeye

It is dangerous to be right when established authorities are wrong.

Voltaire

The next recession by definition will happen with income and wealth disparities at their highest levels ever, and the unrest will likely be a tad more forceful than the well-behaved Occupy Wall Street movement was nine years ago.

Dave Rosenberg

central bank lowers interest rates into negative territory, economic agents switch to cash. Although no-interest rates are worse than positive nominal rates, no-interest rates are better than negative nominal rates. A general negative interest rate policy is therefore not enforceable. This is now evident among the commercial banks in the eurozone, which still are confronted with a negative interest rate of minus 0.4% on excess reserves deposited with the central bank. It can be observed that commercial banks are storing ever larger amounts of cash in their own vaults because the cost of storage plus the risk premium associated with potential robberies is lower than the 0.4% cost incurred by depositing cash reserves at the central bank.

One way of enforcing a monetary policy of negative interest rates encompassing all economic actors would be to ban cash, at least in those countries where the population has not already voluntarily renounced the use of cash to a large extent, such as Sweden and Norway.⁴² Some economists view this option as potentially “more effective”.

Katrin Assenmacher and Signe Krogstrup made a different proposal almost a year ago in an IMF working paper entitled “Monetary Policy with Negative Interest Rates: Decoupling Cash from Electronic Money”.⁴³

By their scheme, the monetary base would be divided into e-money and traditional cash. The devaluation of e-money to the extent of the negative base interest rate of, say, -3.0% could be implemented without any problem. Every 100 monetary units deposited in a bank account would turn into just 97 units after one year. Anyone who sidesteps to cash to avoid this negative interest rate on deposits but deposits the cash into their account later to make a bank transfer would have only 97 units credited to the account for every 100 units deposited, after one year.

This suggestion, which is strikingly reminiscent of Silvio Gesell’s “Freigeld”⁴⁴ (free money), would have the consequence that all prices would have to be labelled twice: once for e-money, once for cash. The scheme would also mean that those persons who keep their money permanently in cash would also be affected by the negative interest rates. But as easy as it is to calculate negative interest rates for book money, because it can be proven exactly to the second who has held how much credit in his account and when, this is virtually impossible with cash. This would make payment transactions with cash considerably more difficult, which is, presumably, the intent of the advocates of a negative interest rate.

⁴² See “Financial Repression - Come to stay”, *In Gold We Trust* report 2018, “The Battle for Cash Goes to the Next Round”, *In Gold We Trust* report 2017

⁴³ Assenmacher, Katrin and Krogstrup, Signe: “Monetary Policy with Negative Interest Rates: Decoupling Cash from Electronic Money”, IMF Working Paper No. 18/191, August 2018. An IMF blog entry from February 2019 refers directly to this paper: “Cashing In: How to Make Negative Interest Rates Work”, *IMFBlog*, February 5, 2019

⁴⁴ Wikipedia entry “Silvio Gesell”

Modern Monetary Theory (MMT) – The new darling of the inflationists?!

“Modern Monetary Theory is an argument that would be wonderfully familiar to every sovereign since the invention of debt. It is essentially the argument that significant sovereign debt is a good thing, not a bad thing, and that budget balancing efforts on a national scale do much more harm than good.”

Ben Hunt

Another gateway to an even looser monetary policy is the “Modern Monetary Theory” (MMT), which is finding more and more supporters, especially in the US.⁴⁵

According to Wikipedia,

“MMT is a heterodox macroeconomic theory that describes currency as a public monopoly for a government and unemployment as the evidence that a currency monopolist is restricting the supply of the financial assets needed to pay taxes and satisfy savings desires. MMT is seen as an evolution of chartalism and is sometimes referred to as neo-chartalism.

MMT advocates argue that the government should use fiscal policy to achieve full employment, creating new money to fund government purchases. The primary risk once the economy reaches full employment is inflation, which can be addressed by raising taxes and issuing bonds, to remove excess money from the system.

MMT states that a government that can create its own money, such as the United States:

- Cannot default on debt denominated in its own currency;
- Can pay for goods, services, and financial assets without a need to collect money in the form of taxes or debt issuance in advance of such purchases;
- Is limited in its money creation and purchases by inflation, which accelerates once the economic resources (i.e., labor and capital) of the economy are utilized at full employment;
- Can control demand-pull inflation by taxation and bond issuance, which remove excess money from circulation, although the political will to do so may not always exist;
- Does not need to compete with the private sector for scarce savings by issuing bonds.”

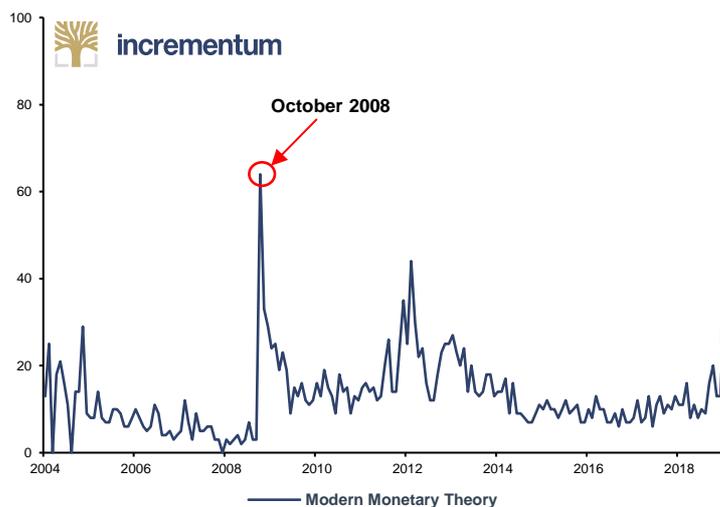
⁴⁵ We first discussed MMT in 2016: “[Inflation and Investment](#)”, *In Gold We Trust* report 2016. For a profound analysis of MMT see Pater Tenebrarum: “[The Revival of Chartalism](#)”, *Acting Man*, May 23, 2011; Rekrn hosts: [The MMT Podcast](#), especially episode 13; Randall Wray: [Modern Money Theory](#); “[Everything you wanted to know about MMT \(But were afraid to ask\)](#)”, *Macro Tourist*, January 30, 2019

There's nothing to prevent the federal government creating as much money as it wants in payment to somebody.

Alan Greenspan

In short, this means that public debt and budget deficits are not a problem. The central bank or the Treasury could always provide additional liquidity, and a state could therefore never become overindebted or illiquid in its own currency. As issuers of fiat money, states are, in the opinion of MMT advocates, unlimitedly solvent. As long as real resources such as labor remain outside of the economic process, i.e., are “idle”, they can be activated by the state, creating additional demand with newly issued money.

Google searches for “Modern Monetary Theory”, 01/2004-03/2019



Source: Google, Incrementum AG

MMT is the theoretical justification for the economic policies of every potential Democratic presidential candidate in 2020. Because with MMT, you CAN have it all. You can pay for wars without end. You can pay for universal single-payer healthcare. You can pay for everyone to go to college. You can pay for a universal basic income.

Ben Hunt

MMT postulates that the strict functional distinction between fiscal and monetary policy – the violation of which is reflected, for example, in the actions brought against the ECB’s various extraordinary measures – should be abolished. **This approach is a carte blanche for politicians to throw their already modest budget discipline completely overboard. In contrast to helicopter money, MMT enables the state to be permanently financed by the central bank. The theory is not entirely modern, however, because direct financing of the state by means of the printing press was already implemented in the Weimar Republic – and ended catastrophically.**⁴⁶

In the USA, which is already in the early campaigning phase for the elections in 2020, these ideas are enjoying great popularity. One example is the idea of a “Green New Deal”, a term deliberately modeled after Franklin D. Roosevelt’s “New Deal”. Others want to finance an unconditional basic income, massive investments in infrastructure, or significant tax cuts once budget and debt barriers are abolished by the application of MMT. The tax cuts pushed through by the Trump administration in 2017, for example, are also in line with the basic tenets of MMT.⁴⁷

⁴⁶ See Stelter, Daniel: “Wie die machtlose EZB zur Gefahr für die Märkte werden kann” (How the powerless ECB can become a threat to the markets), *WirtschaftsWoche*, 11 April 2019

⁴⁷ See “Practitioner’s Guide to MMT: Part 2”, *The MacroTourist*, April 24, 2019

S&P 500, and gold/silver ratio (inverted), 01/1990-05/2019



Source: investing.com, Incrementum AG

Don't underestimate how pissed off the average American is....! Monetary stimulus with fiscal austerity doesn't do anything except make the rich richer.

Kevin Muir

Since 2011, disinflationary forces have provided a tremendous tailwind to financial assets one more time. The relationship between financial assets and the gold/silver ratio in particular drives this point home, as depicted in the chart above. Since the early 1990s there has been an astonishing synchronization: A rising stock market usually goes hand in hand with a falling gold/silver ratio, i.e. an outperformance of silver compared to gold. **However, in 2012 this correlation broke down.**

Our interpretation for this phenomenon is that in previous economic cycles reflation was conventionally achieved by expanding credit. This has a fast impact on the real economy and leads to rising consumer price inflation. This time, reflation was achieved by buying securities, which made monetary assets in particular more expensive but did not sustainably fuel consumer price inflation.

MMT is the sovereign-friendly justification for deficit spending without end.

Ben Hunt

In contrast to QE, MMT will have a much more direct effect on the inflation rate. QE has a direct impact only on the yields of the purchased bonds. Second-round effects may be inflationary, provided that economic agents use the lower refinancing costs for additional expenditures. **MMT, on the other hand, will increase demand more directly and rapidly through higher budget deficits and will bring inflationary price increases with it. This applies in particular to markets that are at or close to their capacity limits, such as the construction sector.**

Holders of financial assets had a great run riding the 35-year wave of declining rates and rising asset values. The return trip won't be nearly as much fun.

Simon Mikhailovich

If implemented, MMT would bring the decade-long bond rally abruptly to an end, and significantly higher yields seem inevitable. More generally, financial assets would tend to suffer, while real assets as well as gold should benefit from the surge in inflation.⁴⁸

30-year US government bonds, in %, 01/1980-03/2019



Source: investing.com, Incrementum AG

Increasing political pressure on central banks

“I am certainly concerned about the independence of central banks in other countries, especially the most important country in the world.”

Mario Draghi

QE is a stagflation machine for market-world, where we've inflated prices for fin'l assets and crushed productive corporate growth. MMT will be a stagflation machine for real-world, where we will inflate prices for goods/services and crush productive private sector growth.

Ben Hunt

But it is not only monetary theorists and economists who are tending the pendulum in the direction of a further easing of monetary policy.

The appointment of leading central bankers is not surprisingly guided by (party) political interests, but the explicit intervention of politicians in monetary policy was previously associated exclusively with banana republics.

This has changed recently. At the International Monetary Fund's spring meeting in Washington, the executive director of the International Monetary Fund, Christine Lagarde, and the outgoing president of the ECB, Mario Draghi, felt compelled to warn urgently against curtailing the independence of central banks.

Draghi's criticism was hardly covert with regard to the US, where President Donald Trump had criticized Federal Reserve policy for some time. In October 2018, after the Federal Reserve raised interest rates again, he tweeted that in his opinion the Fed had “gone crazy”. In the eyes of President

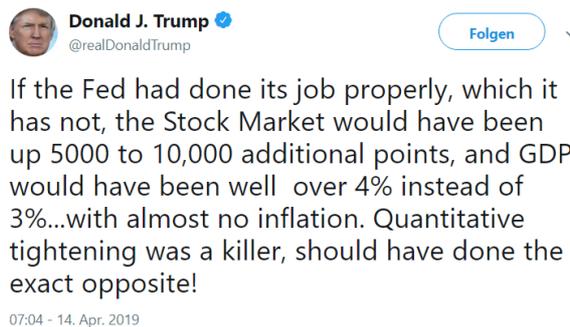
⁴⁸ See “Practitioner's Guide to MMT: Part 2”, The MacroTourist, April 24, 2019

Trump, who himself appointed Jerome Powell as chairman of the Federal Reserve, the monetary policy pursued by Powell is disastrously tight.

Independence has served them well and hopefully will in the future.

Christine Lagarde

In December, the Federal Reserve raised interest rates once again, probably to demonstrate that it is not acting at Trump's beck and call. But Trump will not be content with trying to end the interest rate hikes, because the US presidential election in November 2020 is already casting a long shadow. "It's the economy, stupid": A US economy that is clearly losing momentum would significantly reduce Trump's chances of being re-elected. During the spring meeting of the IMF he tweeted:⁴⁹



It is probably a central feature of Donald Trump's character that he resists institutional limitations. Lagarde's and Draghi's statements are explicit, however: The incumbent US president should respect these limits. Otherwise, it is feared, a loss of confidence in the independence of the Federal Reserve could undermine confidence in the stability of the dollar, which in turn would fuel inflation. Such a loss of trust would only be repairable – if at all – at great cost and effort.

On the other hand, the withdrawal of Stephen Moore, nominated by President Trump for the Federal Reserve Board, from the appointment process is interpreted as a victory for the independence of the Federal Reserve. Even the Republican-dominated Senate, which has to confirm the nominated candidate, had expressed considerable concern that Moore's too-close proximity to President Trump could seriously jeopardize the institutional independence of the Federal Reserve.



Courtesy of Hedgeye

⁴⁹ Donald Trump: [Tweet](#), April 14, 2019, 7:04

On this side of the Atlantic, the left- and right-wing populist government in Italy is once again toying with the idea of nationalizing the Banca d'Italia's large gold reserves in order to finance widening budget deficits through the partial sale of the world's third-largest gold reserves of 2,451.8 tonnes.⁵⁰ Such a step would massively jeopardize confidence in the independence of the Italian central bank, which in turn would have a negative impact on the euro. Given Italy's profound structural problems, these populist motivations will not disappear in the foreseeable future.

Conclusion

Despite all the difficulties, the US is still the undisputed global economic locomotive. If the US coughs, the rest of the world gets the flu. How solid the US economic foundation – and thus the US dollar – really is will only become apparent in the next crisis. **However, we are convinced that the boundless confidence in the US economic engine and the US dollar might begin to crumble in the coming months.**

Status Quo of Gold Relative to Stocks and Commodities

“Although there is no explicit reason why a commodity bear market bottom should coincide with a speculative stock market top, the fact remains that it happened twice before, and history suggests it's about to happen again—another data point suggesting that today's commodity bear market is rapidly drawing to a close.”

Leigh Goehring & Adam Rozenewajg

Bonds and stocks really are just trading off non-market dynamics that would have made Grigory Potemkin very proud.

Dave Rosenberg

Not only absolute performance but also relative performance – especially in comparison to stocks and commodities – is important for a comprehensive analysis of the status quo of the gold price. Thus on the following pages we examine the relative valuation and trend strength of gold compared to other asset classes in order to better understand the opportunity costs of an investment in gold.

Loyal readers know: We regard the continued positive stock market performance as currently the largest opportunity cost of gold. In this respect, a significant outbreak of the gold price could only be accompanied by a stagnating or weaker equity market. A comparison of the development of the gold price with the development of the most important stock market indices shows that the relative weakness of gold seems to be coming to an end on the quiet.

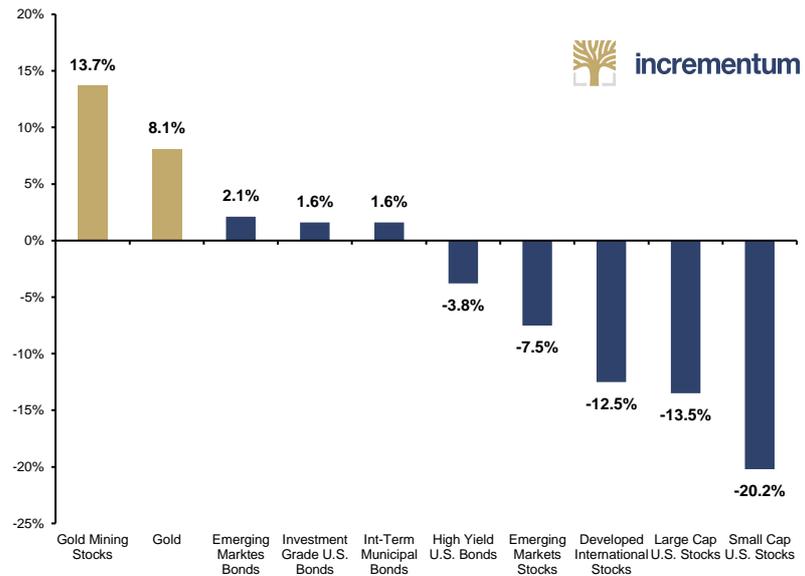
⁵⁰ See [“Salvini schielt auf Goldschatz – Verkauf interessante Idee”](#), (Salvini has an eye on the gold treasure – sale 'interesting idea'), Reuters staff, February 11, 2019

...relative to financial assets, the GSCI is at one of its lowest points in history. That has historically been resolved by commodities putting on a stunner of a show, stoking inflation. I wouldn't be surprised if that happened again.

Paul Tudor Jones

What happened in Q4/2018, when almost every asset class sold off, seems particularly remarkable to us. The S&P 500 was still up a comfortable 9% in the first three quarters, before a sell-off started in October and culminated in December in the weakest performance since the Great Depression. This seems particularly significant as Q4 usually has the best seasonal performance. On a sector basis, only 7 of the 121 industry groups in the S&P 500 reported positive performance. At the top: **gold mining stocks gained 13.71%.**

Performance by asset class, in %, Q4/2018



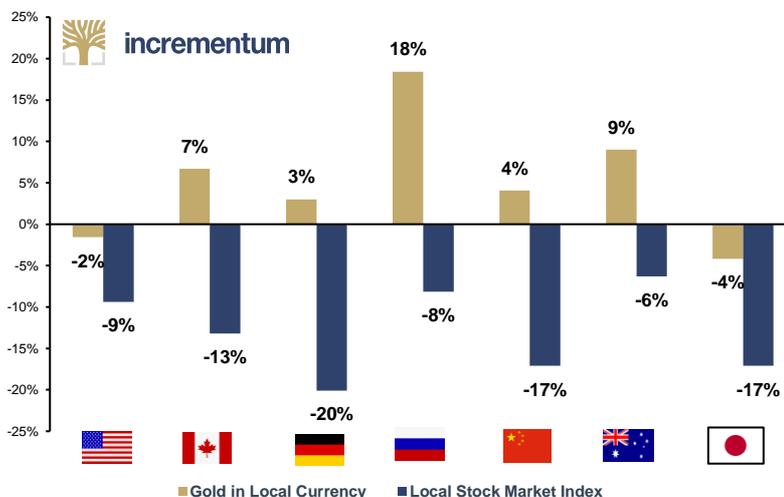
Source: Federal Reserve St. Louis, investing.com, Incrementum AG

A nation's exchange rate is the single most important price in its economy. It will influence the entire range of individual prices, imports and exports and even the level of economic activity.

Paul Volcker

Due to the sharp stock market slump in Q4, 2018 as a whole was a good year for gold relative to major stock indices. For the first time in many years, the seemingly untouchable competitive advantage of stock markets has been seriously questioned. Gold has outperformed all major domestic equity markets. The gold price also showed relative strength in the USA and Japan, even if the price fell slightly in US dollars and yen. However, the losses suffered by stock market investors were respectively 7% and 13% larger than those of US and Japanese gold investors. In Germany, gold investors achieved a return of plus 3%, while the DAX recorded a remarkable loss of 20%.

Gold in local currency, and domestic stock index, annual performance in %, 2018



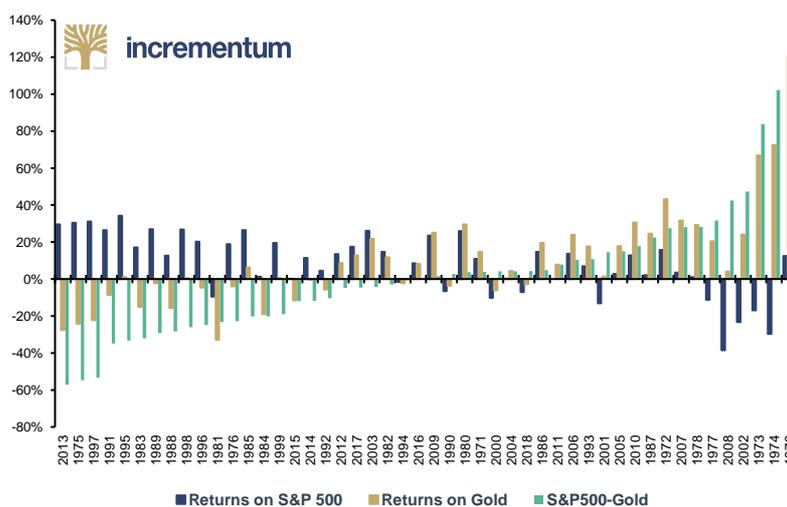
Source: Bloomberg, Incrementum AG

In prosperity prepare for a change; in adversity hope for one.

James Burgh

This comparison clearly confirms our thesis of gold (and mining stocks) as a portfolio stabilizer. This can also be clearly seen from the following chart, which shows the price developments of the S&P 500 and gold. Gold performed poorly compared to the S&P 500 in those years when the S&P posted very high gains. Gold, on the other hand, recorded the highest relative gains compared with the S&P in those years in which the S&P did poorly – with the exception of the special year 1979.

S&P 500 vs. gold, year-on-year change and difference in change, in %, 1971-2018

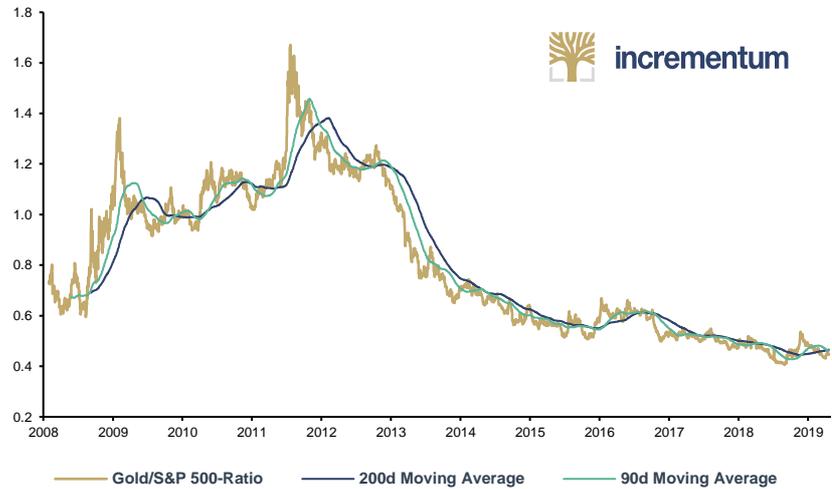


Source: Federal Reserve St. Louis, Incrementum AG

The sharp correction in the stock markets in Q4/2018 has now been more than offset. Gold therefore continues to exhibit some relative weakness as the following chart of the Gold/S&P 500 ratio clearly shows. The trend of an ounce of gold buying fewer and fewer shares of the S&P 500 has not yet been broken, but

the purchasing power of gold measured against the S&P 500 seems to at least be stabilizing.

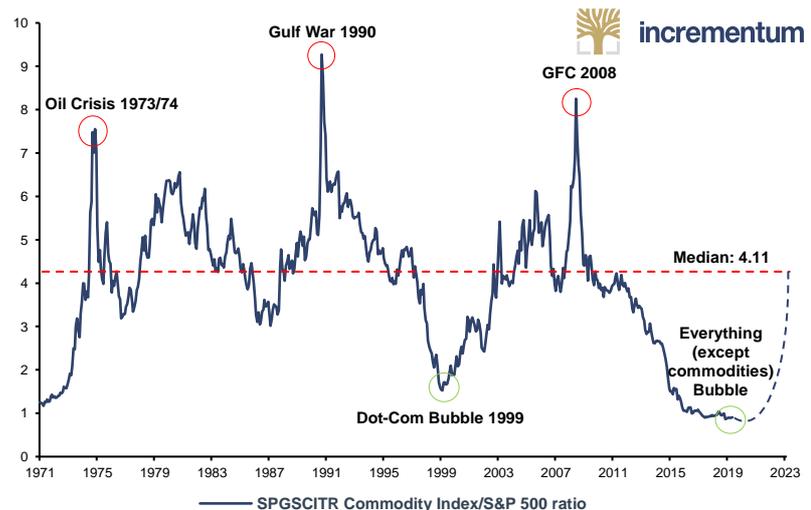
Gold/S&P 500 ratio, 50-day and 200-day moving averages, 01/2008-05/2019



Source: Federal Reserve St. Louis, Incrementum AG

Now let's take a look at the performance of gold relative to commodities. The following chart was by far the most cited one in last year's *In Gold We Trust* report.⁵¹ It is an outstanding illustration of the fact that commodities have traded at an extremely favorable valuation relative to equities, historically. In relation to the S&P 500, the GSCI Commodity Index (TR) stands at 0.9 and thus significantly below the long-term median of 4.11 and light years away from its peaks.

GSCI (TR) / S&P 500 ratio, 1970-2019



Source: Prof. Dr. Torsten Dennin, Lynkeus Capital, Bloomberg, Incrementum AG

⁵¹ We would again like to thank Prof. Dr. Torsten Dennin (Lynkeus Capital), who had the idea for this magnificent chart.

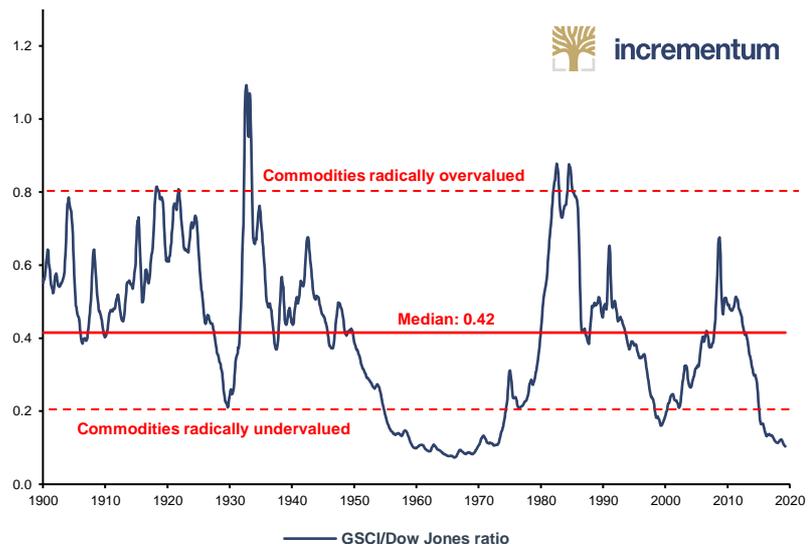
You can't be serious!

John McEnroe

Commodities with lowest valuation in 100 years?

Now we want to take a view of the commodities sector over an even longer time span.⁵² The next chart shows that commodities are currently trading at their lowest level relative to US equities since the 1960s. **Moreover, there were only two other occasions when commodities were similarly undervalued relative to equities: just ahead of Black Thursday on October 24, 1929, and during the excesses of the dotcom bubble.**

GSCI/Dow Jones Industrial Average ratio, 1900-2019



Source: Goldman Sachs Commodity Index since 1970, Goehring & Rozenzweig Commodity Index pre-1970, Bloomberg, Incrementum AG

Now let's take a closer look at the last two phases in which commodities were so cheaply valued compared to equities and then entered a secular bull market:

- **1970s:** The foundation of the gold and commodity bull market (or USD bear market) was already laid in the 1960s.⁵³ While the US dollar had been defined as the weight and price of gold for 180 years,⁵⁴ the pressure to devalue the US dollar increased dramatically in the 1960s due to exploding budget deficits, because of the Vietnam War and other factors. The expansion of the money and credit supply manifested itself at first only in rising share prices, in particular the prices of the infamous "Nifty Fifty"⁵⁵, which were at the epicenter of the stock market mania. While the broad stock market had a P/E ratio of 20 in the early 1970s, the Nifty Fifty had a P/E ratio of 50. Subsequently, a long-term bear market set in on the US stock market – particularly on a real basis. Most of the Nifty Fifty stocks collapsed by 90% or more. Adjusted for inflation, the Dow Jones ended the decade with a minus of

⁵² Our thanks to Leigh R. Goehring and Adam A. Rozenzweig: "Commodities at a 100-Year Low Valuation"?

⁵³ See also chapter "The Enduring Relevance of Exter's Pyramid".

⁵⁴ Until the Gold Standard Act (1900), the US was on a bimetal standard, which effectively ended with the Coinage Act (1873).

⁵⁵ Wikipedia entry "[Nifty Fifty](#)"

48%. The GSCI, on the other hand, recorded a considerable increase of 500%.⁵⁶

- **2000s:** Due to oversupply and clearly negative sentiment, the oil price collapsed around the turn of the year 1998/1999 to below USD 12/barrel, the lowest level since the Great Depression after adjusting for inflation. Boundless pessimism spread in the commodity sector, but it was overlooked that the rapid and broad industrialization of China and other emerging markets would significantly increase demand for commodities. In addition, investment in technology and exploration was neglected for years, resulting in a rapid rise in oil prices to USD 138 per barrel in the summer of 2008. The markets were further supported infamous “Greenspan put”. The rally finally came to an end in the sharp recession of 2008/2009, following the Great Financial Crisis of 2007/2008.

It's important to highlight that both periods of extremely depressed commodities prices (1970 and 2000), were accompanied by overvalued equity markets and related investment bubbles—a situation that exists once again today.

Leigh Goehring & Adam Rozenchwajg

The parallels between the 1970s and 2000s on the one hand and today's situation on the other hand are astounding. Each time, an expansionary monetary policy fed a period of booming stock markets. Subsequently, a decade of surging commodity prices set in. If the GSCI had been bought in 1970 and sold in 1980, an annualized return of 20% would have been achieved. The same applies to the phase from 2000 onwards, when commodities were particularly attractive as equities tended to move sideways. **In recent years we have experienced the most expansive and experimental monetary policy in history, but it has only reached commodity markets peripherally.** What were the Nifty Fifty in the 1960s were the DotComs in 2000 and are now the FAANG stocks as well as unlisted unicorns.

In our opinion, we reached the bottom of the commodity price trough in February 2016. However, investors – especially from the institutional sector, but also from the retail sector – still show little to no interest in the commodity sector. Sentiment and numerous negative arguments such as alternative energies on the rise, China on the verge of collapse, and the shale gas revolution seem commonsensical and are thus largely priced in.

Bull markets are more fun than bear markets.

Bob Farrell

It may be an anecdotal proof, but the mood at the most important industry conferences has been as exciting as a North Korean ballot count. However, we assume that the commodity sector will give us more pleasure again in the future. What's more, the real party may already have begun. **We interpret the extreme relative undervaluation of the commodity sector compared to financial assets described above as an anticyclical opportunity for contrarians with strong nerves and a long-term investment horizon.**

What may change the trend and trigger a new bull market? **From our point of view, the 2 main reasons will be:**

⁵⁶ The apocalyptic forecasts of the Club of Rome caused a “peak everything”-panic right at the peak of the commodities mania in 1980. At exactly the same time, oil production in the North Sea, Alaska and Western Siberia started picking up. These deposits were discovered during the 1960s and 1970s. Subsequently, a 20-year-old bear market in commodities began and confirmed the old adage: “The cure for high prices is high prices.”

- weakness of the US dollar
- reallocation from financial assets to real assets (MMT)

Conclusion

The upward trend on the global stock markets, which seemed unassailable for a long time, suffered a considerable setback in Q4/2018. As a result, gold – contrary to mainstream media reports – rose (significantly) in 2018 relative to stock indices everywhere, and in absolute terms everywhere except the US and Japan. However, the significant undervaluation of commodities compared to equities has not changed significantly over the past year, which is why the upside potential for commodities in general, and gold and silver in particular, remains intact.

Status Quo of Debt Dynamics

“Truth hurts. Maybe not as much as jumping on a bicycle with the seat missing, but it hurts.”

Inspector Frank Drebin

From now on, I will only spend as much as I earn – even if I have to borrow money for it.

Mark Twain

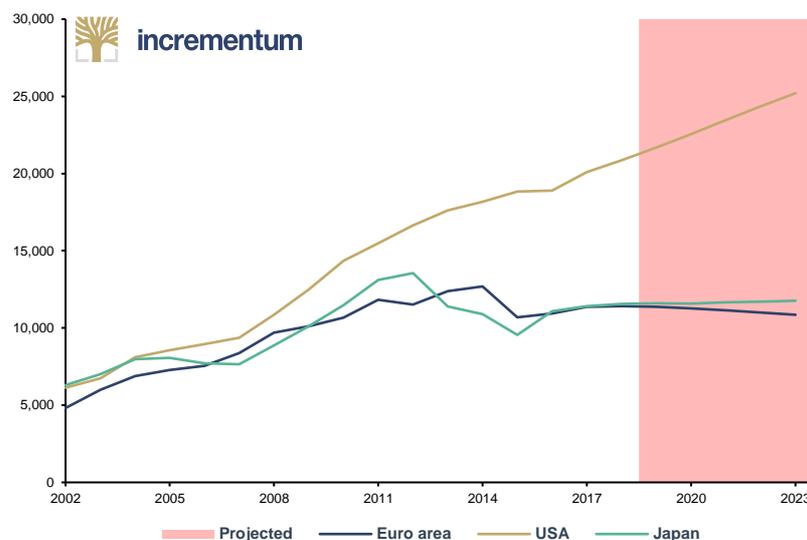
The U.S. is beginning to sport a debt-to-GDP ratio worthy of any banana republic. Therefore, we believe that exposure to gold is both timely and potentially rewarding.

John Hathaway

This year, too, we find it important to remember that overindebtedness is progressing briskly in most economies. The US, in particular, appears to be pursuing its debt policy entirely in line with the well-known cry of Marquise de Pompadour: “Après nous le déluge!”

From 2020, US government debt will exceed the combined debt of Japan and the eurozone, despite the fact that absolute US and Japanese debt were at similar levels until 2011, rising almost in step. By comparison, euro area debt is developing relatively unspectacularly. This is due primarily to Germany’s falling debt level, which with the exception of 2012 has been falling steadily since peaking in 2010, and has been falling even in absolute terms since 2013. In 2018, the 2trn EUR mark was crossed downwards.

Public debt: euro area, USA, Japan, in USD bn, 2002-2023



Source: IMF, OECD, Incrementum AG

High and rising federal debt would reduce national saving and income, boost the government's interest payments, limit lawmakers' ability to respond to unforeseen events, and increase the likelihood of a fiscal crisis.

Congressional Budget Office

The forecasts of the Congressional Budget Office (CBO) for US deficits over the next ten years are worrying, as the deficit is expected to rise significantly by 2029. In every single year, the annual deficit is expected to exceed 1trn USD. **By way of comparison, in 2018 the budget deficit of the entire eurozone was just over EUR 60bn (approx. USD 67bn).** Apart from Italy, France, and Greece, the fiscal soundness of the euro area countries is quite solid. In 2018, Germany recorded a staggering general government surplus of EUR 58 billion, offsetting France's deficit almost exactly 1:1.

As described above, the situation in the US is completely different. In 2019, the debt burden will increase by another USD 1.4trn, which equals Spain's total economic output. In the next 10 years, the debt burden is expected to rise by USD 11.6trn.⁵⁷ This corresponds approximately to the combined GDP of Japan, Germany, and France. **The question arises: Who will finance these deficits and, above all, at what price?**



Courtesy of Hedgeye

⁵⁷ See Congressional Budget Office: "The Budget and Economic Outlook: 2019 to 2029", January 28, 2019

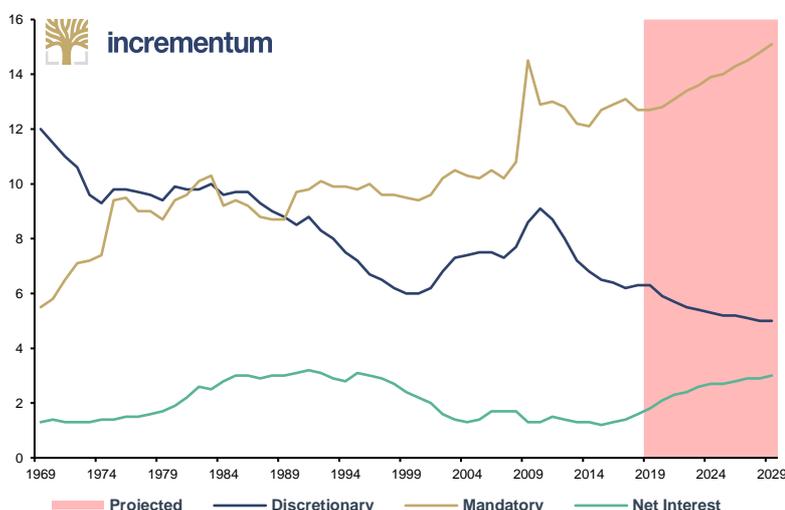
The next chart shows that the US is heading towards a situation in which ever larger parts of the budget are devoted to obligatory expenditures. Because interest payments are also rising steadily despite the low level of interest rates – according to CBO calculations, interest payments will be the third largest expenditure in 2026, the second largest in 2046, and the largest in 2048 – the scope for future-oriented expenditures as well as for infrastructure is constantly narrowing.

When a country has mortgaged all of its future revenues, the state by necessity lapses into tranquility, languor, and impotency.

David Hume

David Hume described well this decreasing room for manoeuvre in his essay “On Public Credit” in 1752: An excess of debt leads to governments pledging virtually their entire future revenues and falling into a state of dullness and inability to act. In the long run, deficits will have a negative impact on US growth potential.

US government expenditures by category, in % of GDP, 1969-2030



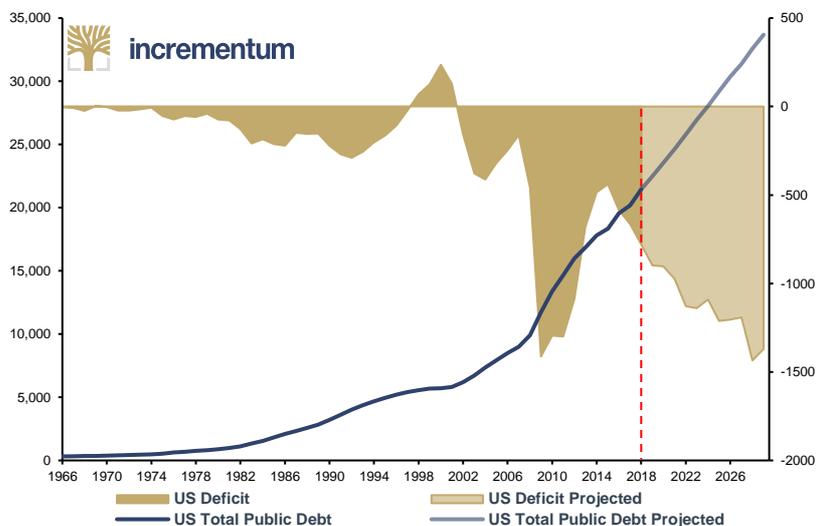
Source: CBO, Incrementum AG

It is a fact that when our national debt gets to the level ours is, that it constitutes an economic threat to society.

**John Bolton,
US National Security Advisor**

It should also be noted that the CBO forecasts are based on very optimistic, almost naive premises. For example, the CBO assumes that the USA will not slide into recession in the next ten years (!) and that the economy will grow by 3% annually. A very bold assumption, especially as the US economy has never experienced such a long upswing phase. Thus, the US deficit could turn out to be significantly higher within the next decade than currently forecast by the CBO.

USA: Debt, in billions of USD (left scale), and deficit (right scale), in billions of USD, 1966-2029e



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

To say Congress is spending like drunken sailors is an insult to drunken sailors.
Ronald Reagan

According to CBO forecasts, the deficit of USD 1,370bn in 2029 will be only slightly lower than in the crisis year 2009 (USD 1,413bn). Budget deficits of comparable size were recorded only in the period 2009-2012. **It should be noted, however, that this was a phase in which the Federal Reserve used QE to absorb almost USD 500bn per year in Treasuries.**

BBB: An Accident Waiting to Happen?

“A consistent rule of thumb that we live by when looking for problems in credit cycles: Follow the debt growth. BBB IG debt outstanding has grown to ~\$2.5trn today, a 227% increase since 2009. Along these lines, we see elevated downgrade activity as a ‘stress point’ when the cycle eventually turns.”

Morgan Stanley Research⁵⁸

While the precarious situation of government budgets is largely known, the indebtedness of the US corporate sector is widely neglected in the public debate. According to an analysis by PIMCO, the net debt ratio of nonfinancials in the BBB area has increased from 1.7 to 3.0.⁵⁹ This means that an EBITDA of 3 instead of 1.7 years is required to repay net debt from operational profit. Thus, the companies rated BBB today are definitely no longer as solidly financed as they were a few years ago.

⁵⁸ See “The Nature of the BBBBeast”, Morgan Stanley Corporate Credit Research, October 5, 2018

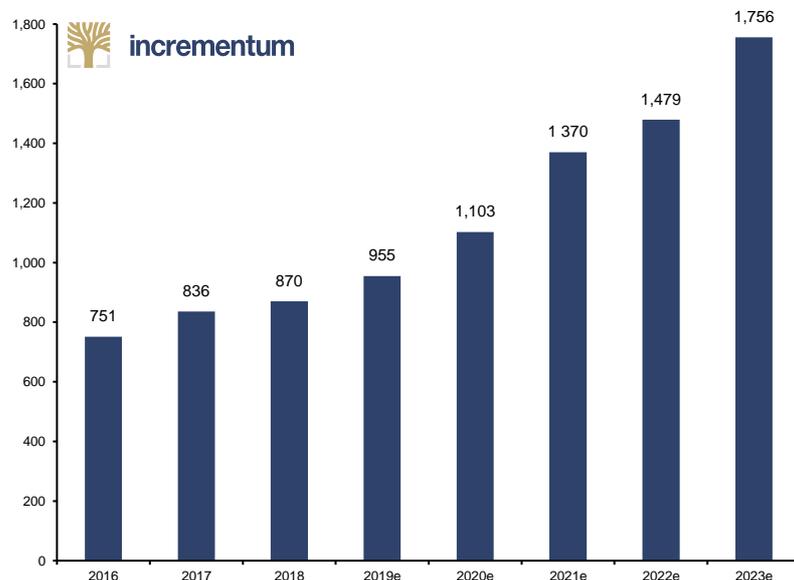
⁵⁹ See Brons, Jelle and Lin, Lillian: “Investment Grade Credit: Be Actively Aware of BBB Bonds”, PIMCO – Viewpoint, January 2018

We have never had a junkier corporate bond market than we do today.

Dave Rosenberg

Since 2009, the volume of the BBB sector has risen by almost 230% to USD 2,500bn currently. The majority of the surge in the BBB market stems from net issuance (1.2trn), followed by downgrades (745bn). In 2019, for the first time in the last five years, more than USD 1trn in US corporate bonds will have to be refinanced and at significantly higher interest rates than at the time of issue. BBB's share of the investment-grade market has never been as high as it is today. Currently, more than half of all investment-grade bonds, i.e. BBB or higher, are rated BBB. **To put things into perspective, the BBB portion of the investment-grade index is now approximately 2.5 times as large as the entire HY index.**

Amount of debt that is coming due: Combination of high-yield, leveraged loans, and investment-grade bonds, in USD bn, 2016-2023



Source: Bloomberg, Gluskin Sheff, Incrementum A

*How did you go bankrupt?
Two ways. Gradually, then suddenly.*

Ernest Hemingway

The last time the share of BBB increased similarly strongly was in the years 2001-2003. However, the reasons were different from today's. Then, excessive investments in the technology sector had to be liquidated, and the deterioration in creditworthiness led to an increase in BBB-rated bonds. Currently, the increase in BBB is taking place in the midst of an (artificial) economic boom. In other words, the quality of corporate bonds held by investors has deteriorated enormously in recent years.

The downgrading of BBB debt by one notch to “junk” level would trigger a domino effect, as refinancing costs would rise significantly. More importantly, it would lead to automatic panic sales by institutional investors, especially ETFs and other passive investment vehicles that are allowed to invest only in investment-grade bonds. In this environment, ETFs and fund managers would become forced sellers at a time when there would probably be few buyers of junk.⁶⁰

⁶⁰ See Pater Tenebrarum: “Corporate Credit – A Chasm Between Risk Perceptions and Actual Risk”, Acting Man, September 14, 2018

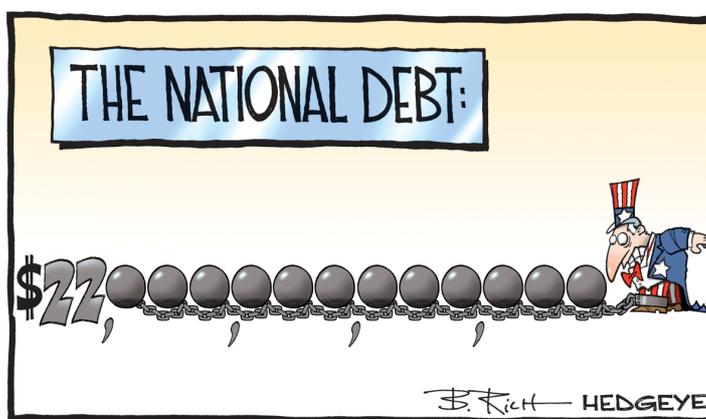
In a zombie economy, zombie companies that own zombie funds sell zombie consumers' pleasures of consumption on credit, or develop zombie capital structures that bypass the consumer.

The Zero Interest Rate Trap

Zombification of the corporate sector

Zombie companies have been around for quite some time. They are companies that would go bankrupt at higher interest rates but are artificially kept alive by the currently low interest rates. A definition based on EBIT (earnings before interest and taxes) assigns a company the status of a zombie if it can no longer pay its interest from EBIT.

Zombie companies are so common even in the strongest economies that even the Bank for International Settlements (BIS) is intensively dealing with the issue.⁶¹ In the US, the proportion of zombies is at its highest level for at least 20 years. In Germany the trend is also upwards. As in other countries, in Germany the principle “once a zombie, always a zombie” holds, as the rate of companies classified as zombies for two consecutive years is more than 85%. To put it differently, despite ultralow interest rates, only 15 out of 100 zombie companies succeed the following year in reducing their debt compared to their operational profit.⁶² Thus, the argument that low interest rates help companies to recover from a state of overindebtedness is incorrect. Since 1999 lending rates for German companies have gone down from 5.5% to 2% and the euro depreciated by more than 30%. **All this has reduced the pressure on companies to become more efficient.**⁶³ **Zombie companies – and the low-interest-rate policy that keeps them alive – thus tie up capital and labor, thereby hampering technological progress and growth.**⁶⁴



Courtesy of Hedgeye

⁶¹ See Banerjee, Ryan und Hofmann, Boris: "The rise of zombie firms: causes and consequences", *BIS Quarterly Review*, September 2018

⁶² See "Achtung, Zombies!" ("Watch out, zombies!"), *Handelsblatt-Grafik*

⁶³ See Gunther Schnabl: "Wie das Billiggeld der Notenbanken den Wettbewerb zerstört", ("How the cheap money of the central banks destroys competition"), *Wirtschaftswoche*, April 21, 2019

⁶⁴ See "Low Interest Rates Might Be What's Hurting Growth", *Bloomberg*, March 25, 2019

... we particularly want to highlight how a lack of trust in the system could accelerate a financial downturn once it has been triggered. These important secular changes can be summarized... as a lack of liquidity in the bond market, because each of the secular changes that we examined will be a barrier to price discovery and investor confidence in the fixed-income markets.

Daniel Zwirn, Jim Kyung-Soo Liew, Ahmad Ajakh

Insanity becomes invisible when it has reached a sufficiently large scale.

Berthold Brecht

This time is different, but it will end the same way

It is not only the sheer size of the bond market but also the structural and secular changes that have taken place in the last couple of years that do concern us at the moment. Now the question arises whether the bond market could be the trigger of the next crisis?

First of all we want to put numbers into perspective. By the end of Q3/2018, the US bond market had over USD 42trn of outstanding debt, eclipsing the US stock market's approximately USD 30trn in market capitalization. Comparing the debt level in 2008 with that at the end of Q3/2018, we find that the mortgage market remained relatively unchanged, while corporate debt outstanding grew more than 1.66x, from USD 5.5trn in 2008 to over USD 9.2trn in 2018. Given this rapid growth in the corporate credit market, there is urgency in trying to understand current market dynamics and in identifying possible hidden risks therein.

In a highly recommended paper called "*This Time Is Different, but It Will End the Same Way: Unrecognized Secular Changes in the Bond Market since the 2008 Crisis That May Precipitate the Next Crisis*",⁶⁵ the authors present **concerns regarding five secular changes brought up by the over-regulation of the marketplace after the financial crisis of 2008 and investors' persistent thirst for yield:**

- Lack of market-making and other regulatory changes that will impede price discovery in the next downturn
- Masking of the deterioration of underlying collateral and "rearview mirror" analysis
- New versions of the old games played by the rating agencies
- Explosion in asset-liability mismatched structures
- Regulatory changes in compliance of financial institutions

Conclusion

Due to the – now global – high indebtedness of all sectors (government, companies, private households), deflation cannot be systemically tolerated. Deflation would further increase the real debt burden, and even higher defaults rates due to bankruptcies would be unavoidable. Because comparatively sound companies would have to adjust their balance sheets in the course of writing off losses due to bankruptcies, a cascading collapse of the debt pyramid would be difficult to prevent.⁶⁶

Therefore, we will wait in vain for significant increases in interest rates or clearly positive real rates in the coming years. **The world seems in large part to be caught in the zero- or at least in the low-interest-rate trap.**⁶⁷ For gold, the age of negative real interest rates, the end of which is not in sight, should have a

⁶⁵ See Zwirn, Daniel, Liew, Jim Kyung-Soo and Ajakh, Ahmad: "[This Time Is Different, but It Will End the Same Way: Unrecognized Secular Changes in the Bond Market since the 2008 Crisis That May Precipitate the Next Crisis](#)", April 29, 2019

⁶⁶ See also chapter "The Enduring Relevance of Exter's Pyramid"

⁶⁷ See "[Sustainable Wealth Accumulation in an Unsustainable Monetary System](#)", In *Gold We Trust* report 2017, Stoeferle, Ronald, Hochreiter, Gregor and Taghizadegan, Rahim: [Die Nullzinsfalle](#), FinanzBuch Verlag, April 2019 (The English edition will be published in late autumn 2019.)

supportive effect for the foreseeable future, since negative real rates are an excellent environment for the yellow metal, as the following chart demonstrates.

Gold price, in USD (left scale), and US real interest rate, in % (right scale), 01/1971-04/2019



Source: Federal Reserve St. Louis, Incrementum AG

Status Quo of Inflation Dynamics

“Volatility collapsed after the crisis because of central bank manipulation. That game’s over. With inflation pressures now building, we will look back on this low-volatility period as a five-standard-deviation event that won’t be repeated.”

Paul Tudor Jones



Finally, let us take a look at the development of inflation. To us it often seems that inflation concerns are one of the most contrarian things these days. As can be seen in the picture on the left, the April 2019 *Bloomberg Businessweek* just proclaimed “the death of inflation”, which reminds us eerily of the historic “Death of Equities” cover in August 1979. While many market participants will remember that cover, only few will recall the subtitle, “How inflation is destroying the stock market”.⁶⁸ It appears to us that inflation pressures are slowly building and the inflation monster on the left might resurrect – especially as this is exactly what politicians and central bankers want to achieve with their monetary experiments. **With roughly USD 10.8trn in government bonds trading at negative rates, inflation seems poised to be the pain trade of the decade.** The *Businessweek* cover might be anecdotal evidence, but it shows us that lowinflation is now fully priced in in everyone’s asset allocation and

⁶⁸ See “The Bell has been rung”, Goehring & Rozencwajg Market Commentary, Q1 2019

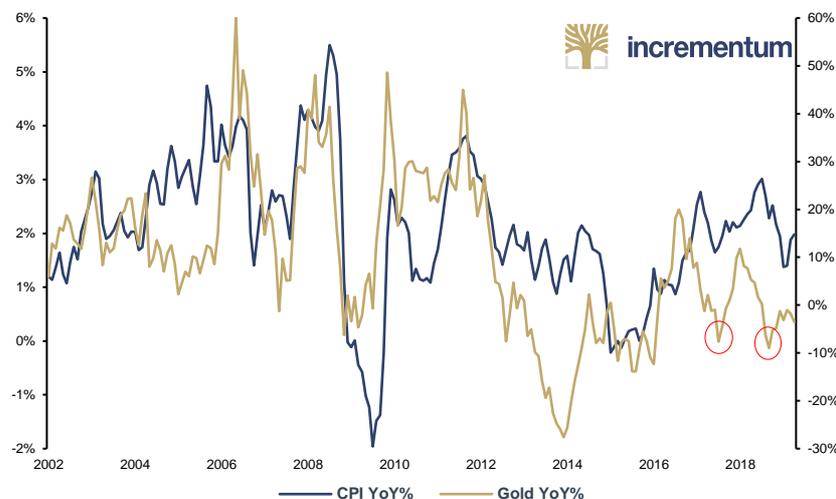
that inflation is at risk of looming large again. **An inflection point in inflation may be close.**

We believe the April 22, 2019 Bloomberg Businessweek cover, 'Is Inflation Dead?', will turn out to be as historic as the 1979 cover.

Goehring & Rozencwajg

Loyal readers know that rising inflation rates generally mean a positive environment for the gold price, while falling but positive rates (=disinflation) represent a negative environment. From the end of 2011 to the beginning of 2015, the inflation trend in the US declined, but since then it has been on the rise again. In July 2018, the CPI reached an interim high of just under 3%, due largely to the base effect. Since then, price inflation has fallen again.

Price inflation (CPI), in % (left scale) and gold price in USD, rate of change in % (right scale), 01/2002-05/2019



Source: Federal Reserve St. Louis, Incrementum AG

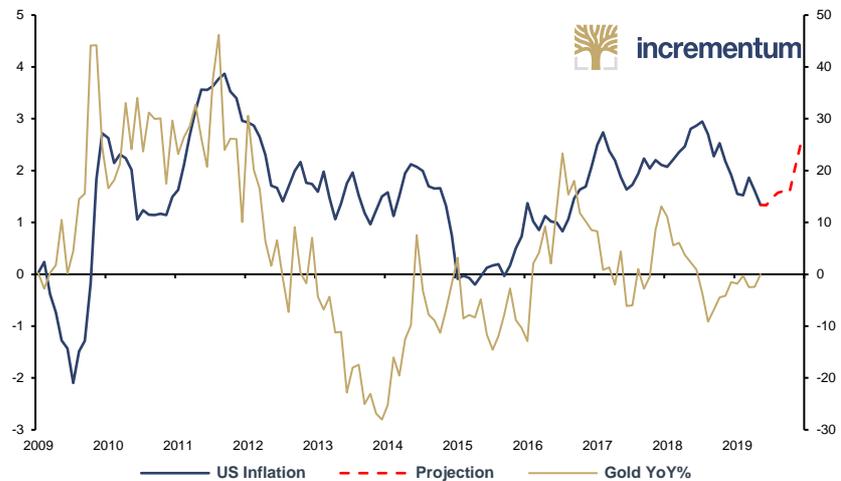
Inflation consists of subsidizing expenditures that give no returns with money that does not exist.

Jacques Rueff

If we now look at the projection of the US inflation rate, it should bottom out at around 1.3% in the summer of 2019 and then tend to become firmer. In November and December 2018, the inflation rate fell – not least due to the falling oil price – so from the perspective of the base effect there is the prospect of an inflation increase in November and December 2019.⁶⁹

⁶⁹ See "Wellenreiter-Invest.de", Robert Rethfeld, May 3, 2019

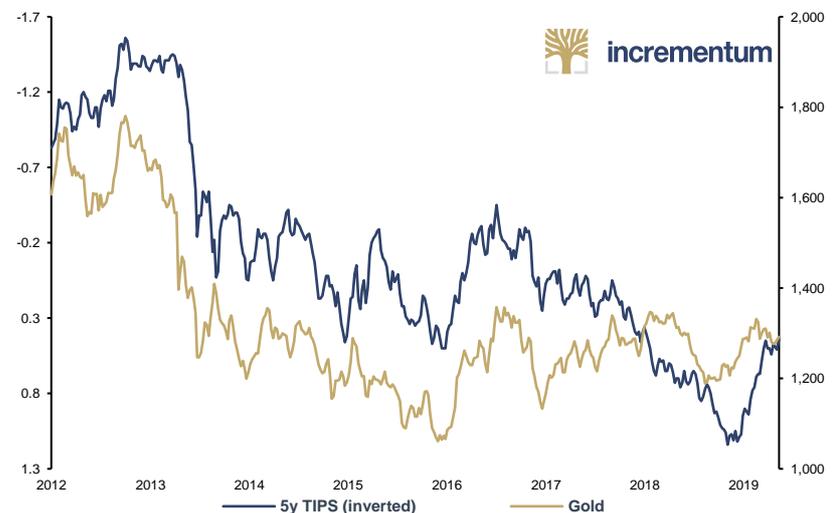
US inflation rate (left scale, projection for 2019), and gold price (right scale, YoY%), 01/2009-12/2019e



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

The yields of inflation-protected bonds show an extremely high correlation to the gold price. If one compares the gold price with the real yields of the 5-year inflation-protected US government bonds (TIPS), it can be seen that the sharp increase of the gold price at the beginning of 2016 was accompanied by pricing-in of rising inflation expectations.

5Y TIPS (inverted), in % (left scale), and gold price, in USD (right scale), 01/2012-05/2019



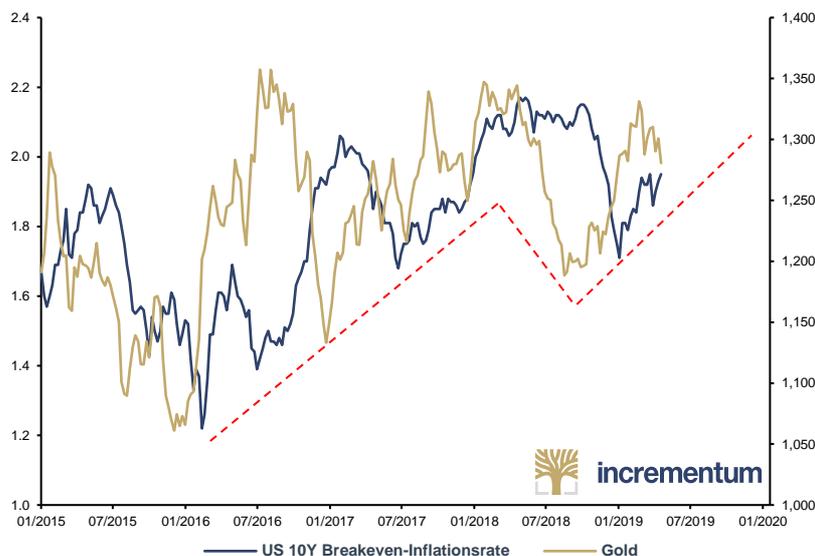
Source: Federal Reserve St. Louis, Incrementum AG

If you impose inflation on stagnation, you get stagflation.

Alan Greenspan

While the inflation rate priced in by US bonds in recent months indicated falling demand for inflation protection, inflation worries have risen again slightly since the beginning of the year according to the break-even rate, but still remain 45 basis points below the long-term average. PCE core inflation, favored by the Federal Reserve, recently fell to 1.6%.

US 10Y break-even rates, in % (left scale), and gold price, in USD (right scale), 01/2015-04/2019



Source: Federal Reserve St. Louis, Incrementum AG

Incrementum Inflation Signal

Whether initially deflationary or ultimately inflationary, this profound shift ends the long period of disinflation, but it also creates the necessity for much more aggressive financial repression in the developed world.

Russell Napier

If you want to get an idea of global inflation trends, it is helpful to look at the price development of inflation-sensitive asset classes such as gold, silver, other commodities (BCOM) or gold mining stocks. These provide forward-looking information on inflation trends in the short and medium term, while conventional inflation statistics only reflect past inflation developments. These statistics are insignificant for the investor, who always tries to predict the price development in the future. We have therefore created a proprietary inflation signal to analyze the current inflation trend. **The inflation signal thus obtained forms the basis for asset allocation decisions.**

Over the past decade and a half, the following major inflationary trends have been observed:

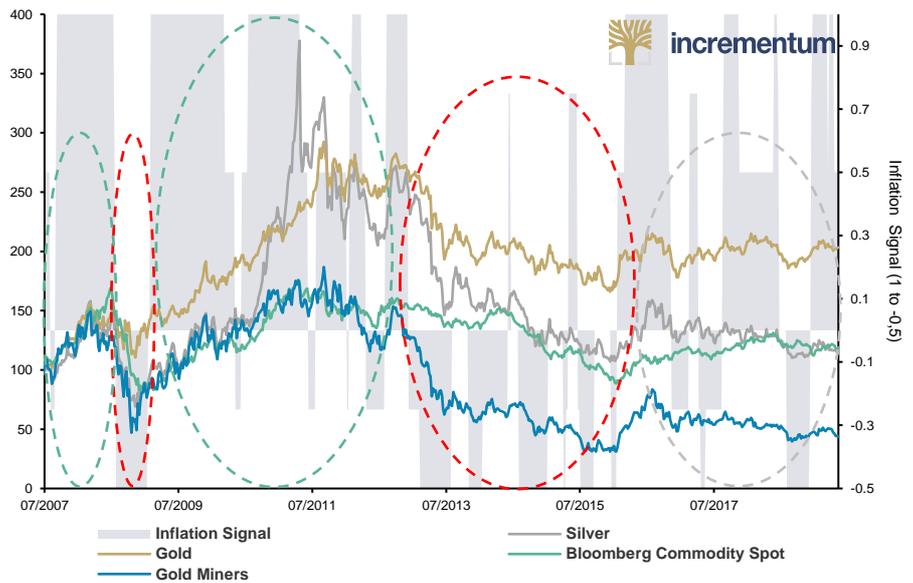
- Inflationary phase until August 2008
- Disinflationary/deflationary shock in the wake of the Great Financial Crisis 2007/2008 until March 2009
- Reflation until 2011/2012
- Disinflationary trend until the end of 2015
- Sideways phase since the beginning of 2016

The lesson is clear. Inflation devalues us all.

Margaret Thatcher

Inflation trends were unambiguous until the end of 2015, but since then this clarity has been somewhat lost. **The large deflationary pressure should be over, but a sustained inflationary trend has not yet set in.** It is quite conceivable that the coming U-turn in US monetary policy will give the inflation trend the decisive impetus to move inflation-sensitive asset classes back into positive territory.

Incrementum Inflation Signal 07/2007-05/2019



Source: Incrementum AG

Let us now turn from price inflation to asset price inflation. The performance of shares of the auction house Sotheby's seem to be a good proxy for asset prices. In connection with the exit of investors out of "hot money", it appears that for the time being the great boom in the art scene is over.⁷⁰

Share price of Sotheby's, in points (left scale), and gold price, in USD (right scale), 01/2014-04/2019



Source: investing.com, Incrementum AG

Still, the share prices of the two French luxury goods companies LVMH Moët Hennessy and Kering, which are representative of the trend in **conspicuous consumption** (also called hedonistic demonstrative consumption), show a steep

⁷⁰ See "Inflation vs. Deflation - The Great Showdown?", In Gold We Trust report 2018

upward trend. The last time the share prices of these two luxury goods manufacturers skyrocketed was in the years of the dotcom bubble. After the bursting of this bubble, the price of both shares fell even faster than they had originally risen.

Stock price LVMH (left scale), and stock price Kering, (right scale), 01/1995-04/2019



Source: investing.com, Incrementum AG

Conclusion

Consumer prices continue to show only a restrained upward trend, a trend that central banks use to justify the continuation of their zero- or low-interest-rate policies. **Rising price inflation coupled with mounting economic risks would probably mean the perfect storm for gold: stagflation. At the moment, however, the consensus view is that this seems an almost impossible scenario.**

Status Quo of Gold Demand

“Central banks have three main objectives when they are thinking about reserve assets: to keep their assets safe, to keep their assets liquid, and to generate returns. Gold can help to meet all three policy objectives.”

Natalie Dempster, World Gold Council

In buying 657 tonnes of gold in 2018, central banks made the largest purchases of gold since the end of Bretton Woods in 1971. Russia (274 tonnes), Kazakhstan (50 tonnes), and India (42 tonnes) were the largest buyers.

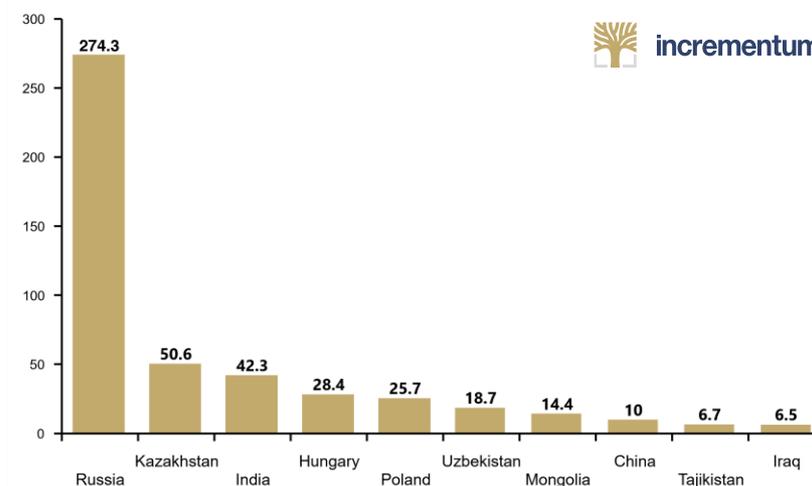
76% of central banks view gold's role as a safe haven asset as highly relevant, while 59% cited its effectiveness as a portfolio diversifier. And almost one fifth of central banks signaled their intention to increase gold purchases over the next 12 months.

World Gold Council

The high demand from central banks continued in the first quarter of 2019. According to the World Gold Council, central banks increased their gold reserves by 145 tonnes, the largest increase since 2013.⁷¹ Russia continued its shopping spree, adding a further 56 tonnes to its reserves in the first quarter, and thus gold now accounts for 18.4% of Russia's total reserves.⁷²

Central banks of some EU states were also net buyers in 2018. As mentioned in the introduction, Hungary has increased its gold reserves tenfold. Poland, also a non-euro country, is one of the top five buyers and last year made its largest purchase since 1998.

Gold purchases, in tonnes, 2018



Source: World Gold Council, Incrementum AG

⁷¹ See “Gold Demand Trends Q1 2019”, World Gold Council, May 2, 2019

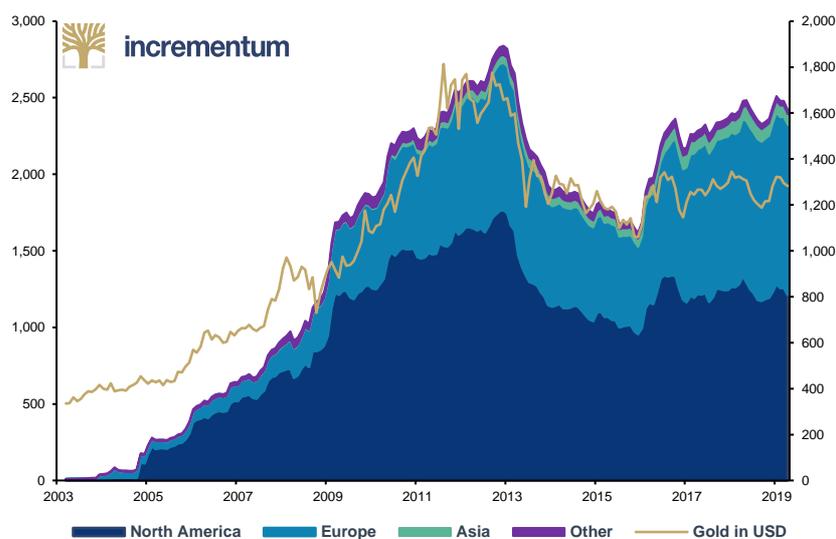
⁷² See “Russland kauft weiter tonnenweise Gold” (“Russia continues to buy tons of gold”), Goldreporter.de, April 22, 2019

Moreover, the interest of financial investors in gold is slowly rising again. This is confirmed by the inflows into gold ETFs, which have been on the rise since the end of 2015. For us, this indicator is representative of Western financial investors, who choose ETFs as the primary instrument for managing their gold exposure. This is also reflected in the fact that gold ETF inflows follow an extremely procyclical pattern.

Geographical segmentation shows that in recent years European investors have weighted gold ETFs more strongly than their North American peers. Since 2016, European exchange-traded products (ETPs) have increased rapidly and have reached a new record high. Assets under management (AuM) in European gold ETFs rose to 2,440 tonnes at the end of 2018. This is now equivalent to 45% of the total market.⁷³

We interpret this increase primarily as a consequence of the devastating zero- or negative-interest-rate environment, aggressive ECB policy, smoldering fears of recession, and political developments, as well as the rather weak stock market performance in Europe, especially relative to US markets.

ETF gold holdings, in tonnes, and gold price, in USD, 01/2003-04/2019



Source: World Gold Council, Bloomberg, Incrementum AG

Gold is forever. It is beautiful, useful, and never wears out. Small wonder that gold has been prized over all else, in all ages, as a store of value that will survive the travails of life and the ravages of time.

James Blakeley

Private investors are showing a strong interest in gold, as the recently published *Edelmetall-Atlas Schweiz* reveals. The renowned University of St. Gallen has produced this report on behalf of and in cooperation with philoro Schweiz AG.⁷⁴ After real estate but still ahead of equities and fund investments, gold ranks second among the most popular forms of Swiss investment. Almost every fifth Swiss considers it likely that he or she will buy gold in the next twelve months.

According to the report, the most important reason that investors give for buying gold is to hold it as a long-term investment, followed by

⁷³ See World Gold Council: "Market Update: European ETPs reach record highs", April 17, 2019

⁷⁴ www.goldstudie.ch

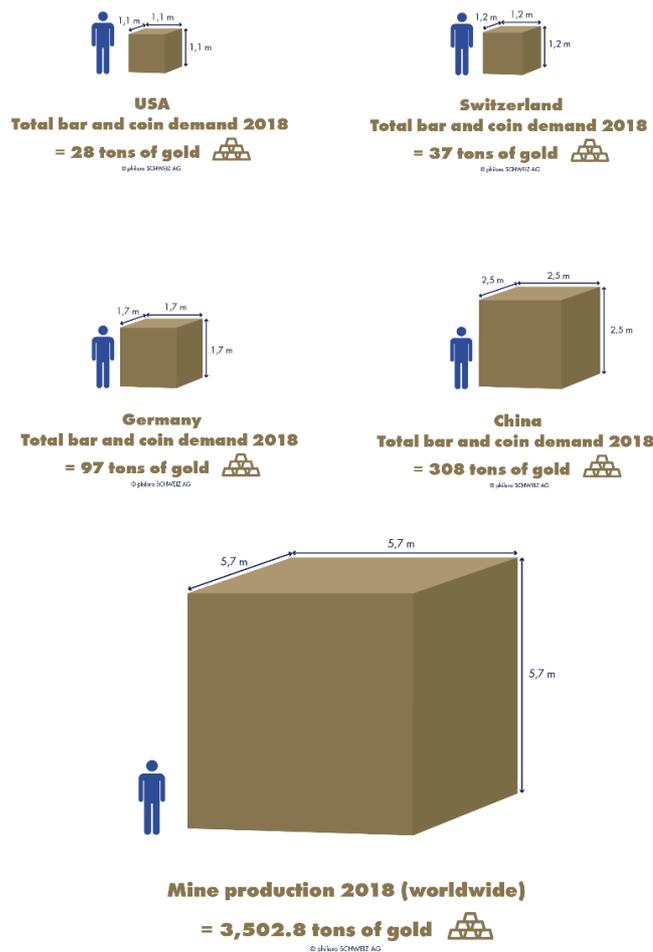
security, stability, asset accumulation, and finally return. This shows that the typical Swiss gold investor is long-term-oriented and not focused on short-term speculative gains. Interesting are also the results regarding the question as to where people prefer to buy gold. In all age cohorts, the investor's house bank ranks first; nevertheless, there are clear differences in purchasing behavior among the age groups. The older the investor, the more often the house bank is chosen. Second ranked among the youngest investors (18-29 years) is the online purchase of gold, while with the 30–39-year-olds, precious metal dealers with stationary places of business take the second spot.

O Gold! I still prefer thee unto paper, which makes bank credit like a bark of vapour.

Lord Byron

The comparatively high affinity of the Swiss for gold is summarized in the following chart. The demand for gold by private investors in Switzerland exceeds that in the US and on a per capita basis is significantly higher than the demand in Germany or China.

Gold demand USA, Switzerland, Germany, China, in tonnes, and mine production, in tonnes, 2018



Source: University of St. Gallen, philoro SCHWEIZ AG

Changes in Basel III – not a Big Deal!

In the spring of 2019, a change in the risk-weighting rules for gold in the relevant guidelines of the Bank for International Settlements (BIS), as part of the Basel III banking regulations, led to sensational reports on the gold scene. There was even talk that the gold standard would be reintroduced through the back door.

On closer inspection, however, the changes appear far less spectacular, not to say nearly insignificant. The new standards stipulate that for gold held for third parties or for gold held in another bank on an allocated basis, i.e. if the gold is covered by corresponding gold liabilities, the risk weighting has been reduced from 50% to 0%.⁷⁵

I like gold because it is a stabilizer; it is an insurance policy.

Kevin O'Leary

A risk weighting of 50% meant that only 50% of the maximum equity capital deposit of 8%, i.e. only 4%, of the amount to be assessed had to be raised as equity. If the amount to be assessed was EUR 1,000, previously EUR 40 had to be held as equity. Under the new rules it is EUR 0. Equity is in turn a complex composition of Common Equity Tier 1, Additional Tier-1, and Tier-2 capital. These standards cover only the credit risk of a bank, i.e. the risk that a liability has to be written off in part or in full. The regulations do not deal with market risk, i.e. the risk to a bank's balance sheet from changing market prices for assets. This market risk is particularly significant when banks hold gold without a corresponding hedge.

Anecdotal evidence of three worldviews – investment demand will tip the balance on the gold scales

Like any price, the price of gold depends on the assessments of market participants. As we have seen, gold, in its capacity as a hedge against crises of trust, is thus directly dependent on the level of public trust. In an earlier *In Gold We Trust* report, we described three groups of people whose worldviews differ fundamentally in their assessment of the overall economic situation, in order to be able to better assess the expectations of market participants and thus the development of gold prices.⁷⁶ We developed these summary worldviews through countless discussions with professional market participants, including asset managers, fund managers, and private bankers.

Roughly, these three groups can be characterized as follows:

1) “Believers”: persons with high trust in the status quo

Well, it's too late tonight to drag the past out into the light.

“One”, U2

This group of people has no fundamental doubts about the status quo.

They consider the measures implemented in the wake of the Great Financial Crisis to be fundamentally correct and expedient. Following this view, the economy is in a healing process, even if it is healing slower than expected. All in all, however, “the patient” is on the road to recovery. **This view is currently the most**

⁷⁵ Basel Committee on Banking Supervision (BCBS): “Basel III: Finalising post-crisis reforms”, December 2017. There it says under number 96: “A 0% risk weight will apply to (i) cash owned and held at the bank or in transit; and (ii) gold bullion held at the bank or held in another bank on an allocated basis, to the extent the gold bullion assets are backed by gold bullion liabilities.”

⁷⁶ See “Where Things Stand”, *In Gold We Trust* report 2016

widespread. The proportion of gold in the portfolios structured by these individuals has been low or zero in recent years.

2) “Skeptics”: *people who had initial doubts about the recovery but who regained trust in the status quo*

In this camp are people who had an initial, timid distrust of the sustainability of the extreme economic policy measures taken in the last decade. In the portfolios they manage they allocate gold on a pragmatic basis. **In the years following the Great Financial Crisis, a lot of gold was accumulated, but in the meantime these positions have been reduced and often completely eliminated.** Due to earnings pressure, in recent years these investors have increasingly relied on the classic “risk-on” investment classes such as equities, high-yield bonds, etc.

This group of marginal buyers will play a particularly important role in the future development of the gold price. They will enter the gold market without hesitation if it seems interesting again, especially if the psychologically and medially important resistance zone at USD 1,360-1,380 is taken out.

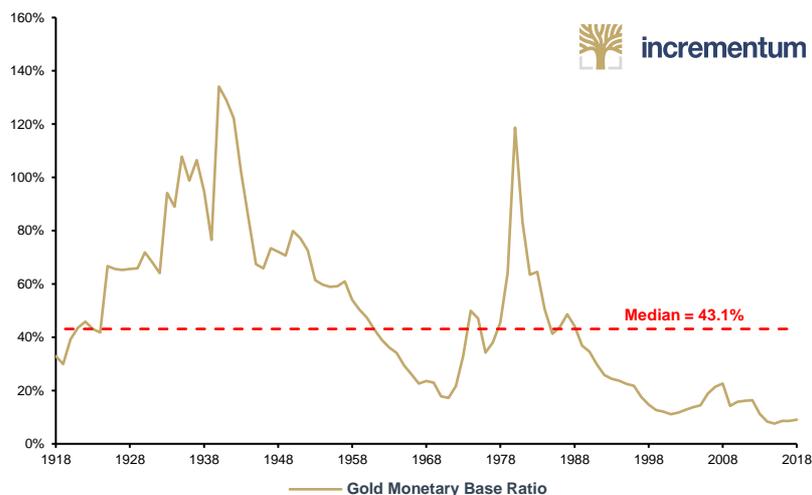
3) “Critics”: *people who question the viability of the status quo*

What’s past is prologue.
William Shakespeare

This group is convinced of a systemic error in the structure of the monetary system; from their point of view, most of the rescue measures of recent years only addressed the symptoms, not the root cause of the problem.

This group is characterized by a high affinity for investing in gold and sees gold as the ultimate investment hedge against the erosion of economic, political, and social trust. The value of the US Treasury’s gold holdings has historically traded in a band between 20 and 140 percent of the monetary base. Currently, the percentage stands at 9%, which clearly indicates an extreme undervaluation of gold.

US gold reserves at market prices/M0, 1918-2018



Source: Federal Reserve St. Louis, World Gold Council, Incrementum AG

USD strength is the key pillar of the deflationary mindset. A crumbling of that pillar would lead to a very different investment environment.

Louis Gave

The relative size of these three groups is relevant for the development of the gold price. The gold price will be boosted as soon as there is a shift from the groups with comparatively high confidence in the status quo (1+2) to the groups with relatively low confidence in the status quo (2+3). This shift between the groups may occur suddenly – albeit not unexpectedly from the point of view of the third group. **This shift would strongly increase investment demand for gold, but also for silver and mining stocks. In our opinion, investment demand will tip the balance for the further development of the gold price.**

Conclusion

The roaring bull markets in equity, bond, and real estate markets are still showing no signs of fatigue, which also blocks spillover into consumer prices – and into gold. **Gold purchases by central banks, mainly in the East – some buying significant amounts – show, however, that at least these agents do not really trust the seemingly perpetual low-inflation environment.** The accelerating trend towards the repatriation of central bank gold (e.g. by Romania, Poland, Germany, and the Netherlands) also speaks to the declining trust in financial centers in Anglo-Saxon countries.

Gold is therefore anything but a barbaric relic, neither for central banks nor for private investors nor for institutional investors, even if the latter in particular are still hesitant.

The Status Quo: Conclusion

“Whoever wishes to read the future has to leaf through the past.”

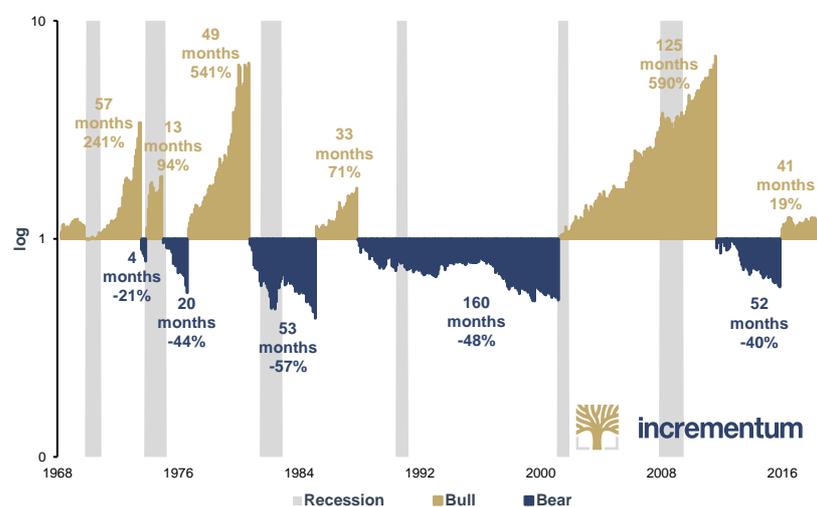
André Malraux

Gold is not a drug that cures the disease but merely a symbol of the flight from dishonesty – a symbol of independence, honest money and permanence.

Anthony Deden

We remain convinced that we are in the early stages of a new gold bull market. As we have explained, we see considerable price potential in the commodity markets generally. These are significantly undervalued both in absolute and relative terms, especially in comparison to stock markets. **If you look at the gold bull markets of the last 50 years, you can see that even in its weakest upward period, gold was able to gain 71%. This makes us optimistic about the future.**

Gold in bull and bear markets, in % (log), 04/1968-05/2019



Source: Bloomberg, Incrementum AG

Last year we quoted our esteemed colleague Adrian Day, who said, “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.”⁷⁷

In other words, gold investors should not fall into the trap of having too-high price expectations. A look at the current situation in the financial markets shows that gold is still facing considerable headwinds, even if the wind strength has weakened since last year’s *In Gold We Trust* report:

- (US)Equities are still the most popular asset class and close to all-time highs.
- Volatility remains at a relatively low level.
- In almost every country real estate is trading at or close to all-time highs and is considered to be “without alternative” (aka “concrete gold”).
- Trust in the financial system and in banks remains relatively high.

⁷⁷ “People expect too much from Gold – Adrian Day”, Kitco News, September 18, 2017

The good news is that we know what is coming next. The bad news is that we know what is coming next.

Russell Napier

You can't be a real country unless you have a beer and an airline – it helps if you have some kind of football team, or some nuclear weapons, but at the very least you need a beer.

Frank Zappa

- Relatively low (price) inflation.
- Central banks tend to be more hawkish than in previous years.

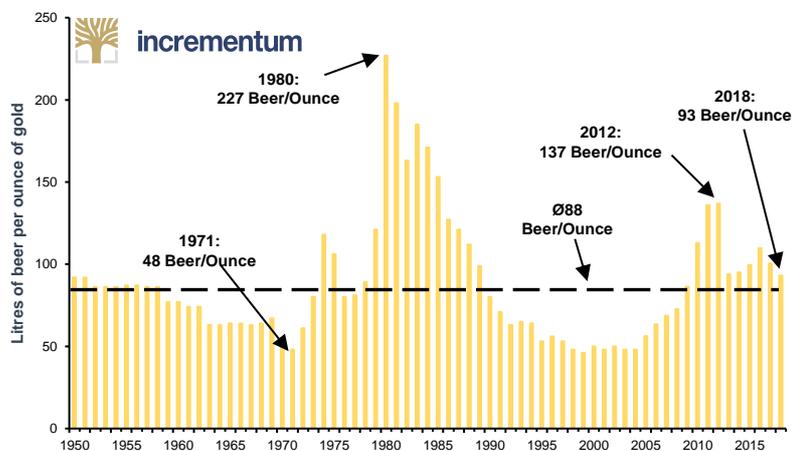
What makes us think that the headwinds have slackened? The most important reasons are deteriorating economic figures, the discontinuation in the US of interest rate hikes, and the probable end of quantitative tightening by autumn, as well as a strengthening stance in favor of a more lax fiscal policy. **The developments in Q4/2018 in particular confirm our assessment.**

Longer-term macroeconomic and geopolitical factors should also translate into a positive “atmosphere” for gold. This will be discussed in detail in the following.

As we do every year, we end our golden tour d’horizon with a visit to the Munich Oktoberfest. An *In Gold We Trust* report without the Gold/Wiesnbier Ratio is like a beer without foam. Where does the fabled ratio currently stand?

At the last Oktoberfest a one-Maß (1-litre) beer cost up to 11.50 EUR. In 1950 the beer-loving visitor had to put only 0.82 EUR on the counter. Since 1950, the annual average inflation rate of the Oktoberfestbier has therefore been 4.0%. How many Maß of Oktoberfestbier do you get this year for an ounce of gold? Currently an ounce buys you 93 Maß of Oktoberfestbier. Measured by the historical average of 88 Maß, the “beer purchasing power” of gold is above the long-term average.

Gold/Wiesnbier Ratio, 1960-2018



Source: Historical archive Spaten-Löwenbräu, statista.de, Incrementum AG

Beer makes you feel the way you ought to feel without beer.

Henry Lawson

However, we are still a long way from the historic high of 227 Maß per ounce of gold in 1980. We do not consider it unlikely that this high can be achieved again. Whether the consumption of an ounce of gold in the form of Oktoberfestbier is desirable, each reader must decide for himself. The fact that the increasing purchasing power of gold may cause (alcohol-induced) headaches is not in the spirit of the inventor of this exercise.

Our
Vienna Philharmonic
is much more
than gold.



Gold is the epitome of preciousness. Our products are made using only the very highest standards, be they ecological, ethical or technical. We have been producing the *Vienna Philharmonic*, one of the world's most sought-after gold coins, since 1989. It is much more than gold. I can personally guarantee that.

Gerhard Starsich
CEO of the Austrian Mint



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For more information about better gold, visit: www.austrian-mint.com

Gold and the Dragon – China Stabilizes Its Ascent with Gold

“One has to be far-sighted, not short-sighted.”

Deng Xiaoping

Key Takeaways

- China continues to liberalize its financial markets. The gold market is of crucial importance to this effort and serves as a regulative element in the liberalization of CNY.
- Amid further financial market liberalization, the gold market could experience a strong surge in demand on account of bullion purchases by Chinese institutional investors.
- The Belt and Road Initiative (BRI), a.k.a. One Belt, One Road (OBOR) or New Silk Road, is going to cement China's position as the world's top-ranked gold consumer as well as producer and will keep boosting physical gold trading at the Shanghai Gold Exchange (SGE).

From AD1 to 1820, the two largest economies were always those of China and India. Viewed against the backdrop of the past 1800 years, the recent period of Western relative over-performance against other civilisations is a major historical aberration. All such aberrations come to a natural end, and that is happening now.

Kishore Mahboubani

China harbors one of the most fascinating societies and cultures on our planet, but at the same time it remains a sealed book for the West. The Middle Kingdom can not only look back on more than 3,500 years of continuous history, it is also the only culture in the world that succeeded in making a comeback after falling, and it actually did so twice. At the dawn of the 21st century the country is on the verge of becoming the ruling economic, cultural, and possibly also military power on earth for the third time.

In 2019 we are therefore publishing the *In Gold We Trust* report for the first time in a Mandarin version. China is not only the world's largest gold producer, it is also the largest consumer of the precious metal. The Shanghai Gold Exchange has established itself as an important player in the gold market. The People's Bank of China (PBoC) continues to increase its gold holdings – even as it releases announcements to this effect either with a delay or not at all. In order to understand why the Chinese are so strongly focused on the precious metal, one has to look beyond the rim of one's golden tea cup, so to speak. China's history suggests in many ways that the Chinese may well have a better grasp of “money” than people of other cultures, while the era of the unequal treaties in the 19th and early 20th centuries provides important pointers for understanding China's ambitions in the 21st century. Remarkably enough, the two aspects – China's monetary history and its downfall in the colonial era – are closely connected.

Gold, Money, and History

“China has to stood up, grown rich and become strong.... China is set to regain its might and re-ascend to the top of the world.”

Xinhua, 19th Party Congress, October 2017



Kublai Khan
Source: Wikipedia

The historical China is firmly tied to four great inventions: paper, the magnetic compass, gunpowder, and the printing press. In addition, the Middle Kingdom also set monetary evolution into motion: The Chinese were the first people to use metal, clay, and ivory to recreate the shells of kauri snails, which were used as a means of payment and a medium of exchange in large parts of Southeast Asia, India, and Africa. The first man-made money was thus created.

China was also the first culture to gain experience with paper money. The first predecessor of paper money emerged during the Tang dynasty (AD 618 - 907), but it was only properly implemented in the Northern Song dynasty (AD 960 – 1127). The paper money of the Yuan dynasty became known in Europe through Marco Polo.⁷⁸ Under Kublai Khan, Chinese paper money was still backed by precious metals, while private ownership of gold and silver was concurrently prohibited. The successors of the great Khan abolished the precious metal backing. As a result of the subsequent episodes of high inflation and hyperinflation, paper money was

⁷⁸ See Polo, Marco: “How the Great Kaan Causeth the Bark of Trees, Made Into Something Like Paper, to Pass for Money All Over his Country”, *The travels of Marco Polo*, Book 2, Chapter 24

finally abandoned in the 14th century. **From the first half of the 15th century at the latest, silver became the dominant means of payment in China and was the preferred means for settling tax obligations.**⁷⁹

As trade with Europe was rapidly taking off, an unofficial silver standard as well as the first free banking system⁸⁰ in the world were established in China in the early 16th century. Both remained in existence until 1935. Thereafter China's central bank, which had been founded in 1927, abolished the silver standard and started issuing banknotes. The ever-faster inflation spiral that ensued contributed significantly to the victory of the communists in the civil war.⁸¹

In the almost 500 years during which the silver standard prevailed, no coins were minted most of the time; bars were primarily used instead, and were either called *tael* or *liang*. Their weight varied significantly depending on location and time period.⁸² Merchants would often cut off an adequate piece from a bar. The historical combination of an unofficial silver standard with a free banking system continues to be echoed in the language of modern-day China: e.g. the term **for bank is *yínháng* (銀行), which literally means “silver warehouse” or “silver shop”.**

It is also noteworthy that the devaluation of silver against gold occurred with a significant delay in China but progressed much faster than in the West once it had started. The demonetization of silver in China did not take place until the 20th century. In the 14th century, when the gold-silver ratio had long since reached 1:15 in Europe, in China one part of gold was still exchanged for just four parts of silver. Only after China and Europe began to trade with each other did silver quickly shed its value against gold in China.⁸³

*In a country well governed,
 poverty is something to be
 ashamed of. In a country badly
 governed, wealth is something to
 be ashamed of.*

Confucius

This trade relationship had further repercussions. A massive trade imbalance between East and West developed. While European demand for Chinese goods kept growing by leaps and bounds – with demand for tea, porcelain, and silk particularly strong – the Chinese were far more reluctant to purchase European goods, not so much because Europe had nothing to offer the Chinese (especially after the beginning of the Industrial Revolution in Britain in 1750) but rather due to Sinocentrism and the Confucian ideal of modesty. Over time Europe incurred ever larger trade deficits; hence capital outflows from Europe to China became quite sizable.

⁷⁹ See Budetti, Dominic V.: “From Silver to Opium: A Study of the Evolution and Impact of the British-Chinese Trade System from 1780 to 1842”, *Undergraduate Library Research Award*, 2016

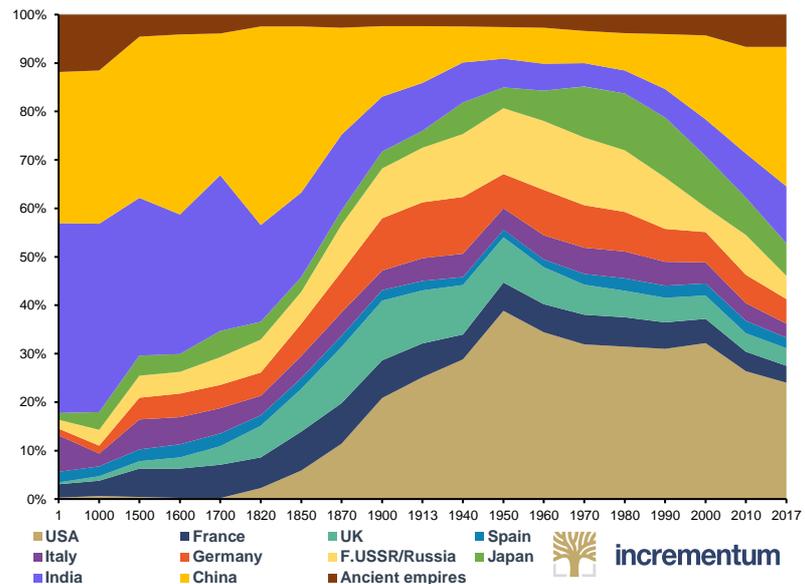
⁸⁰ In a free banking system there is no government regulation of the banking industry whatsoever. Everyone is free to issue their own banknotes – whether they will be used as means of payment is decided by market forces. Similarly, interest rates on deposits and loans are also determined by market forces.

⁸¹ See Ebeling, Richard M.: “The Great Chinese Inflation”, *The Freeman*, December 2004, Vol. 54 and Chang, Jung: *Wild Swans: Three Daughters of China*. Harper Collins, 1991

⁸² Which is already a first hint that China – despite its ethnic homogeneity (90% of the Chinese are Han) – has far more traditional and cultural variety than might appear to be the case to outside observers.

⁸³ See Williams, Talcott: “Silver in China: And Its Relation to Chinese Copper Coinage”, *The Annals of the American Academy of Political and Social Science*, Vol. 9 (May, 1897), p. 43-57

Distribution of global GDP, 1–2017 AD



Source: Maddison, Angus: *The World Economy, 1–2008AD*, Univ. of Groningen; IMF; Incrementum AG



Caricature by Le Petit Journal, 1898
Source: : Bibliothèque nationale de France

The British trade deficit ultimately led to China losing its status as one of the global superpowers, because the British Empire did not mean to reduce the capital outflows in a fair manner. In order to lower the trade deficit, the British flooded China with opium. Imports of the drug grew thirty-fold between 1773 and 1837.⁸⁴ Millions of Chinese citizens became addicts and suffered the associated economic and social consequences. The two Opium Wars (1839–1842 and 1852–1860) made abruptly and brutally clear to China how backward the country had become compared to the West. This was a shock in light of the Sinocentric worldview of the Chinese, who had from time immemorial regarded their culture as the leading one and their country as the cultural, intellectual, and economic center of the world.

The first opium war ended in 1842 with the treaty of Nanjing, the first of the “unequal treaties”. The result was the opening of China, enormous reparation payments by the Chinese to the British, and Hong Kong Island being ceded to the UK “in perpetuity”.⁸⁵ Countless similar treaties followed. For the next 100 years China was a pawn of the European powers as well as of the US and later Japan.

The trauma of the unequal treaties continues to haunt China and is not only a very important driver of China's foreign policy but also informs the perspective of the Chinese people in general. It is one of the strongest driving forces of the renewed ascent of China.⁸⁶

⁸⁴ See. Boehm, Runhild: *Englands Opiumkriege in China (England's Opium Wars in China)*. 2000, p. 7ff

⁸⁵ From a purely legal perspective Britain was thus only obliged to return Kowloon and the New Territories to the People's Republic in 1997. Everyone may answer for himself whether it is not a caricature of international law when dispossession by fire and sword is considered legal, but returning the stolen property isn't.

⁸⁶ See Wang, Zheng: *Never forget national humiliation*. New York, 2014

A New Era

“The Chinese Dream⁸⁷ is the great rejuvenation of the Chinese nation.”

Xi Jinping



Deng Xiaoping, 1979
Source: Wiki Commons

Modern-day China without a doubt begins with the reforms initiated by Deng Xiaoping.⁸⁸ The short, big man from the village of Paifang in Sichuan recognized what would be revealed to the world at large only a decade later: communism was a dead end. When Deng started his reform efforts, Soviet-style communism had seemingly reached its pinnacle. The US had been humiliated by a small, completely outgunned opponent in Vietnam; the Soviet Union was flexing its military muscle with its invasion of Afghanistan (1979); and the Olympic Games in Moscow (1980) created the illusion that communism was capable of producing cultural high points.

Mao’s successor was evidently farsighted and capable of strategic thinking. All in all, this has been the Chinese trend ever since. So far every leader after Deng has continued the reform program, sometimes with more, sometimes with less fervor. The reforms and the opening up of China, which are not considered a single phenomenon in the Middle Kingdom, are processes that play out over the span of decades and in which a “trial and error” approach is definitely seen as legitimate – in contrast to the practices in “normal” Chinese society. Pragmatism is the watchword in this process. One is not bound by ideological dictates: What works is good and is adopted; what turns out to be ineffective is discarded again. However, the principle that stands above everything else is that the rule of the Communist Party of China (CPC) must be preserved. For this purpose greater liberties may either be granted or be taken away again. The events surrounding the demonstrations on Tiananmen Square in 1989 constitute evidence for this fact that is as convincing as it is sad. The reform process, despite having been very successful over the past 30 years, is definitely not a one-way street – not from the perspective of the CPC, anyway.⁸⁹



Guangzhou skyline 2018
Source: Getty Images

Today, in the 40th year of reforms, China presents itself as a modern state to visitors from the West. The skylines of Shanghai, Guangzhou, and Shenzhen inspire wonder and admiration. The country’s highways are state of the art. The high-speed railway network of China’s state-owned railway company comprises 29,000 kilometers of track, which represent two thirds of all high-speed railway tracks in the world. Among the world’s cities with the largest subway networks, Shanghai, Beijing, and Guangzhou are ranked in first, second and third place. Since 2014 China has been the largest economy in the world, at least in terms of purchasing power parity. **Its gross domestic product grows**

⁸⁷ See Wikipedia entry “Chinese Dream”

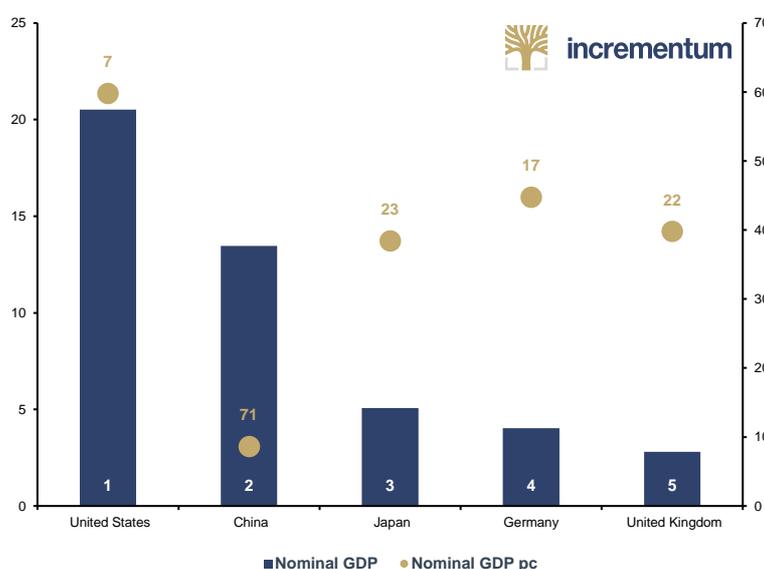
⁸⁸ Of course one might argue that Mao Zedong created the basis for this, by ending the chaos of the civil war (1924-1949) and then – more importantly – breaking up the extreme hierarchical structures and traditions that were many thousands of years old in the course of the “Great Leap Forward” and the “Cultural Revolution”. However, under a (hypothetical) continuation of Mao’s rule, China would still be a place of fear and terror today.

⁸⁹ See “China vor einem großen Sprung zurück?” (“Will China face a Great Leap backwards?”), *Die Presse*, October 13, 2015

by around USD 1trn every year. This growth is roughly equivalent to two thirds of the annual output of the entire Russian economy.

But this is only part of the picture. In reality, China has two sides. The image of the super-rich up-and-comer is put into perspective if one considers GDP per capita in the People's Republic. From this perspective, **China is ranked 71st, flanked by Kazakhstan and Nauru, at around USD 8,600 per person, slightly below the global average.**⁹⁰

The five largest economies in the world and their ranking by GDP, in trillion USD (left scale), and GDP per capita, in thousand USD (right scale), 2017



Source: IMF, Incrementum AG

Depending on the calculation, between 600 and 800 million people still live in relative poverty in the country's interior, and can only dream of the lives of average middle class citizens in Shanghai, with their well-appointed condominiums and mid-range cars, drinking caffè latte at Starbucks.

Absorb what is useful, reject what is useless, add what is specifically your own.

Bruce Lee

This situation can be interpreted in two ways: Either China is a colossus resting on a very fragile foundation, whose ascent will fail due to its inner contradictions and the huge chasm between the poor rural and rich urban regions; or China's rise is far from over and the country has at most realized half of its potential. The CPC is definitely aware of the problem and clearly addresses it in the recently adopted 5-year plan. Apart from a focus on expanding certain specific industries, it discusses above all the need to uplift the rural population.⁹¹

Despite China's reforms, impressive skylines, and modern infrastructure, one must not proceed from the assumption that China has changed into anything akin to a real market economy or a truly liberalized system. At best it is a simulation thereof.

⁹⁰ The figures refer to 2017. See [CIA World Factbook](#)

⁹¹ See [The 13th five-year plan for economic and social development of the PRC](#)

Nearly all areas of the economy continue to be directly or indirectly controlled by the CPC. The so-called “Xi Jinping Thought”⁹² leaves no doubt that this will remain the case for the foreseeable future. This applies to the country's financial markets as well.

China's Financial Markets

“Bringing order to a large state is like frying small fish.”

Tao Te Ching, ch. 60

If you want one year of prosperity, grow grain. If you want 10 years of prosperity, grow trees. If you want 100 years of prosperity, grow people.

Chinese Proverb

A lot has happened since the (re-)establishment of the Shanghai Stock Exchange in 1987. This is indisputable. Today the two leading exchanges of the country, Shanghai and Shenzhen, are ranked 4th and 5th worldwide in terms of market capitalization. And yet, despite reforms and the trend toward opening up, it remains difficult for non-Chinese investors to access China's financial markets. With the Qualified Foreign Institutional Investor program (QFII)⁹³, introduced in 2002, foreign institutional investors were for the first time provided the opportunity to trade directly on Chinese stock exchanges. The so-called Stock Connect programs started in Shanghai in 2014 and Shenzhen in 2016 were set up in cooperation with the Hong Kong Stock Exchange and are giving foreign private investors access to invest directly in A-shares.⁹⁴ However, compared to the size of global capital flows, trading volumes remain very modest.

Stock Connect, China/Hong Kong trading volume in billions of HKD, 2016-2017



Source: HKex, Incrementum AG

⁹² See Wikipedia entry “[Xi Jinping Thought](#)”

⁹³ The program is currently limited to USD 100bn, a fairly modest sum relative to the size of China's population. Moreover, there are additional restrictions; see [QFII](#), Investopedia.com.

⁹⁴ There are different classes of Chinese shares (A-, B- and H-shares), which depending on their classification are either available only to foreigners or only to Chinese citizens. See e.g. “[The ABC of China's Share Markets](#)”, Mark Mobius Blog, October 16, 2012.

For those listening to all the gloomy “economic” news out of China, consider the broader picture. Beginning in 1978, led by Deng Xiaoping, China has been moving in a steady three steps forward/one step back kind of trend – away from the statist teachings of Marx and towards a more market-oriented society. Yes, the “Communist Party” still rules, but the degree of coercive state intrusion into individual and corporate lives and decisions has been in clear retreat.

Michael Oliver

The goal would be to create a reserve currency that is disconnected from individual nations and is able to remain stable in the long run, thus removing the inherent deficiencies caused by using credit-based national currencies.

Zhou Xiaochuan, People’s Bank of China (Governor)

China's financial markets are different in other respects as well. China's stock markets are dominated by retail investors, hence their volatility and sensitivity to sentiment are quite pronounced. Many Chinese traders see the stock market as a casino rather than a genuine investment venue. Moreover, only trades on the long side of the market are allowed. Day trading is prohibited, and countercyclical strategies are much harder to implement due to the short-selling ban. This ban is also another reason for the high volatility of the Chinese stock market.

Large parts of China's private equity and venture capital industries don't invest to maximize profits but rather to fulfill political directives. If Beijing wants to see “artificial intelligence” promoted, companies active in the field will receive capital, in more or less a shotgun approach. IPOs are also not a matter of markets in China, but rather of government approval. The Public Offerings Review Committee (PORC), a special agency created by China's market supervisor (the China Securities Regulatory Commission – CSRC) decides who may list shares on the stock exchange, and when and how, if at all. This is one of the main reasons why so many Chinese companies have opted for listing their shares abroad.⁹⁵

China's currency is not yet fully convertible, either. The exchange rate is no longer fully administered by the central bank but is tied to a currency basket that includes more than a dozen currencies, the CFETS RMB Index.⁹⁶ Nevertheless, the yuan remains far from being a freely convertible currency. The currency is not only a medium of exchange but also a tool of economic policy. The alleged extent of the yuan's undervaluation is a constant bone of contention with the US.⁹⁷ Capital controls remain in place and were recently even tightened. This actually demonstrates quite clearly how trustworthy China's citizens believe their own currency to be. Under such circumstances it is inconceivable that the yuan will replace the US dollar as the global reserve currency anytime soon.

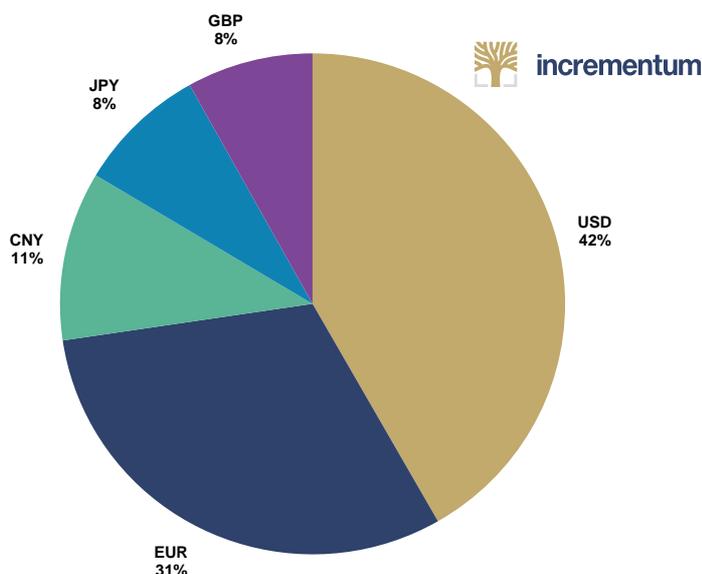
Nevertheless, reforms and steps toward opening up China's markets are clearly in evidence. The most unambiguous symbol of change was the admission of the CNY into the IMF's SDR currency basket in 2016, which rather remarkably happened mainly to the detriment of European currencies. China's leaders definitely consider financial markets as an important medium of influence and power projection. This is inter alia demonstrated by the CNY-denominated oil futures contracts traded in Shanghai, CNY-denominated trade treaties, and of course the gold futures contracts and the gold fixing at the Shanghai Gold Exchange (SGE), which are also denominated in CNY.

⁹⁵ See “Chinas Aktienmärkte. Extremes Wachstum, strenge Kontrolle, vorsichtige Öffnung” (“China's stock markets, extreme growth, strict control, careful opening”), *Investment Platform China/Germany*, issue 1, February 2019. A good overview of the current state of Chinese financial markets was also provided by Peter Fuhman, CEO of China First Capital in this nearly two-hour lecture at the University of Michigan: “China – Great Economy, Lousy Investment Destination?”

⁹⁶ See “CFETS RMB Index”, *Chinamoney*, March 4, 2019

⁹⁷ See Morrison, Wayne M.: “China's Currency Policy”, Congressional Research Service, updated on February 20, 2019

Composition of the IMF's SDR currency basket



Source: IMF, Incrementum AG

Shanghai Gold Exchange

“China's gold market has to become integrated with the international gold market.”

Zhou Xiaochuan

A goal is not always meant to be reached, it often serves simply as something to aim at.

Bruce Lee

For a long time, private ownership of gold and silver was prohibited in modern-day China as well. In 2004 private gold ownership was finally officially permitted again, two years after the founding of the SGE. Today, the SGE, the fourth-largest gold exchange in the world, has a number of unique characteristics compared to the London Bullion Market (LBMA). Gold traded in Shanghai has a higher purity – 99.99% compared to 99.95% in London – and is traded in grams rather than troy ounces. The majority of futures contracts are backed with physical gold, and cash settlement is possible for only one third of the open interest.⁹⁸ Almost all physical gold consumption in China, whether institutional or private, is carried out via the SGE. Only China's central bank, the People's Bank of China (PBoC), purchases gold from other sources.⁹⁹

Since 19 April 2016 the SGE has its own daily gold fixing, which is determined through benchmark auctions. This is not least a reaction to the fact that despite

⁹⁸ See “Shanghai Gold Exchange”

⁹⁹ While the PBoC doesn't comment on where the gold it accumulates is coming from, the fact that it isn't coming from the SGE is evidenced by the following: central banks as a matter of principle hoard traditional LBMA good delivery bars with a weight of approximately 12.5 kg or 400 troy ounces and a fineness of 99.95% - but such contracts are barely traded at the SGE.

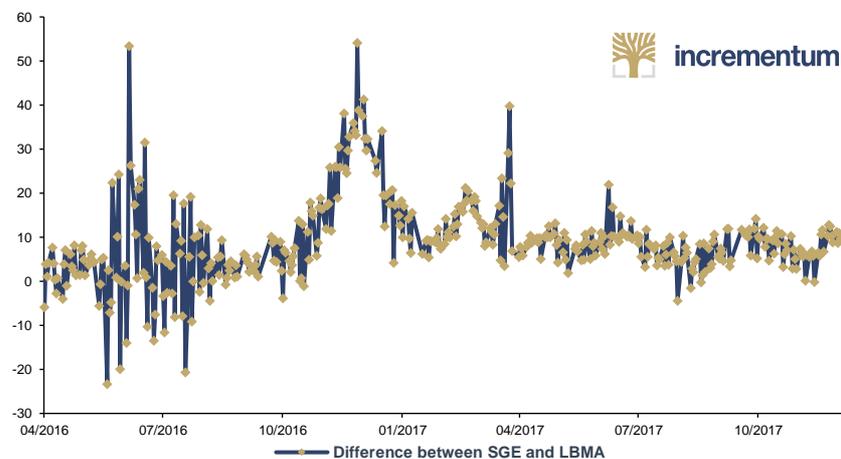
expressing strong interest, Chinese banks were not invited to participate in the LBMA auctions, which started on 20 March 2015.¹⁰⁰

It is noteworthy that the afternoon fixing at the SGE almost always exhibits a slight premium over the LBMA fixing. In most cases price moves in the 4:15 hours between the Shanghai PM fixing and the London AM fixing provide a satisfactory explanation for the difference; but when the price difference amounts to USD 10 or more, this explanation no longer seems adequate. Particularly in November/December 2016, when the gold price established its most recent low, prices between these exchanges moved apart significantly, with the difference at its peak reaching more than USD 60. **One possible explanation for this is that the buying behavior of Asians generally tends to be countercyclical: When prices decline sharply, they tend to pounce.**

China treasures its promises and commitments with a thousand taels of gold.
Xi Jinping

In keeping with this, bullion demand in Shanghai rises when prices decline, and prices therefore decline less precipitously than in London. The growing importance of the SGE establishes a corrective mechanism, which puts a brake on excessive sell-offs in Western futures markets. It can therefore make sense for investors to take a look at SGE prices in order to determine whether short-term price moves are exaggerated. Furthermore, arbitrage becomes an attractive proposition on these occasions. **As a result gold is flowing from the West to China.**¹⁰¹

Price difference SGE vs. LBMA, in USD, 04/2016–12/2017



Source: SGE, LBMA, Kitco, Bloomberg, Incrementum AG

The SGE will be all the better able to fulfill this corrective function the more openly and tightly it is integrated into international markets. In 2004, Zhou Xiaochuan,

¹⁰⁰ This is the classical approach of Chinese policy-makers. One strives for cooperation and consensus. If this cannot be achieved, one embarks on one's own path. Thus Beijing for a long time demanded that the IMF and World Bank be reformed. The aim was for these institutions to better reflect the growing importance of emerging market countries by offering them greater representation. The US adamantly refused to countenance the idea, upon which China eventually founded the Asian Infrastructure Investment Bank (AIIB). See ["Wie sich die USA an ihre Macht im IWF klammern"](#) ("How the US clings to its power at the IMF"), *Handelszeitung*, April 4, 2015

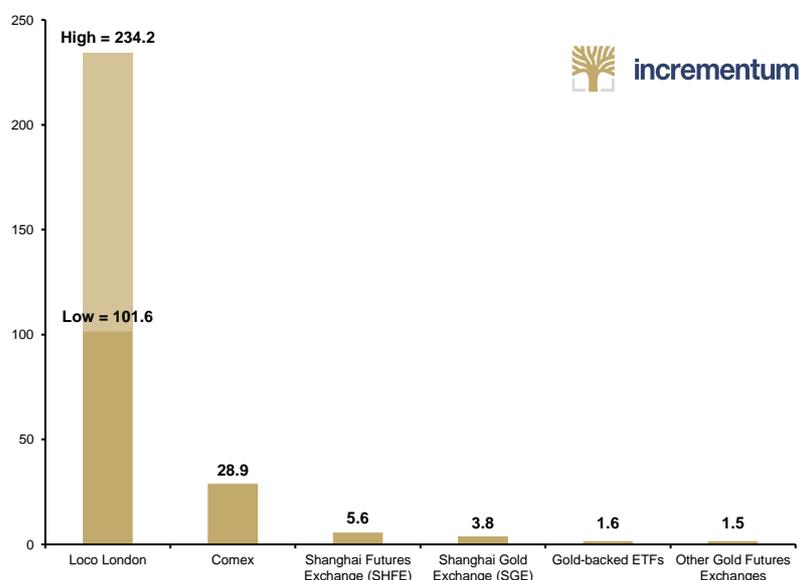
¹⁰¹ See Grummes, Fabian: "One metal, two prices", *Smart Investor*, February 2017; Meader, Neil: ["Between the Chinese and International Gold Prices"](#), *Alchemist*, Vol. 83, October 2016

chairman of the PBoC from 2002-2018, communicated China's plans with respect to the gold market quite clearly in a speech delivered at the LBMA in London:

“China’s gold market should gradually realize three transformations: from commodity trade to financial product trade, from spot transactions to futures transactions, and from a domestic market to integration with the international market.”¹⁰²

Today China is the world's leading gold producer as well as the largest gold consumer. The Shanghai Futures Exchange (SHFE) is ranked third worldwide in terms of gold trading volume, and the SGE is the most important trading venue for spot physical gold trading. In other words, with respect to the first two steps specified by Zhou, China is already on the right track.

Largest gold trading venues by volume, in billions of USD, 2018



Source: World Gold Council, Incrementum AG

Finally, in 2016 the third aspect of the transformation of the Chinese gold market was tackled: opening it to international investors and international trade. The SGE International enables both gold trading and exports of physical gold for foreign investors in Shanghai. From the Shanghai Free Trade Zone (SFTZ) the precious metal may be exported, unlike from the rest of China. The establishment of this trading venue fits perfectly into a much larger undertaking, the Belt & Road Initiative which raises China's ambitions generally to a new, global level.

¹⁰² See Zhou, Xiaochuan: [“Give Full Play to the Gold Market’s Investment and Hedging Functions”](#), London, 2004

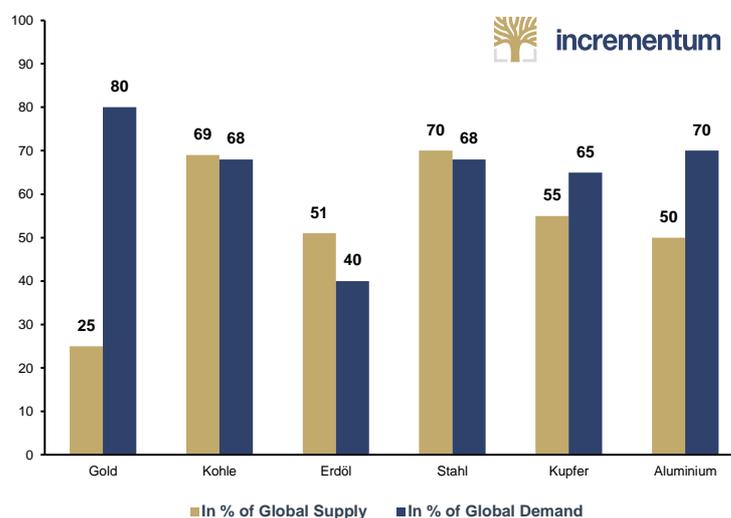
The Belt & Road Initiative

“One generation builds the road on which the next one drives.”

Chinese Proverb

The Belt & Road Initiative (BRI), also known as the “New Silk Road” in the West, aims to deepen and facilitate trade relations between China, Eurasia, and East Africa through a multitude of infrastructure and investment projects. The BRI encompasses 68 countries and regions, which are home to around half of the global population and currently generate around one third of global GDP.

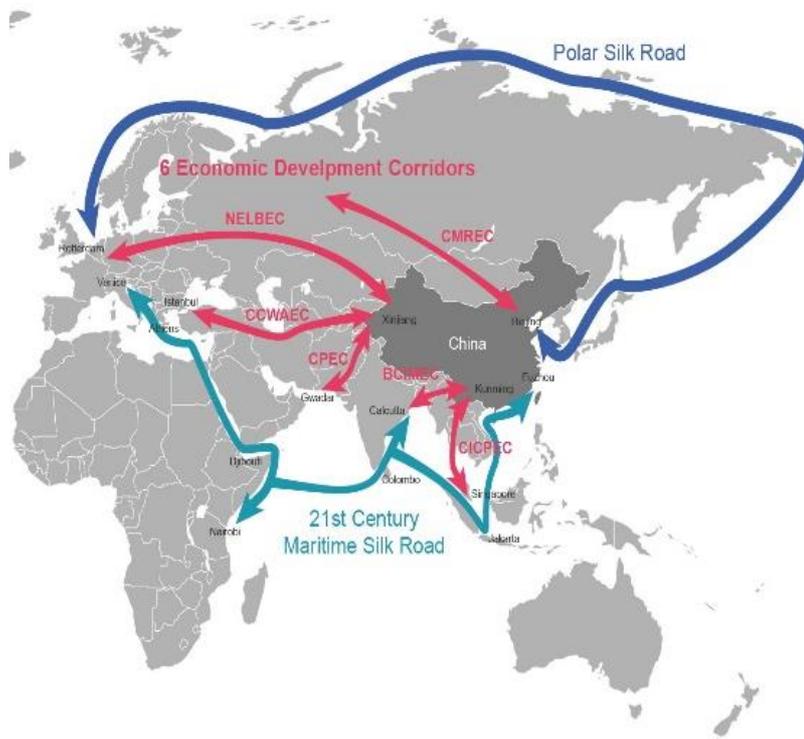
BRI region's share of global production and consumption of selected commodities in %, 2017



Source: AEI, BOCI Research 2017, Heritage Foundation, Incrementum AG

One can look at the BRI from a variety of perspectives. On the one hand, it serves as an avenue for the diversification of China's financial reserves and as a means for investing the proceeds from its trade surplus. On the other hand, it is also an excellent propaganda device, which seamlessly ties in with the great and long history of China as a trading nation and can be used to sell the story of the country's resurgence on the international stage to the Chinese public. Moreover, the initiative can definitely be seen as a part of China's greater plan of expanding its influence over the rest of the world and as a way of preparing for potential future conflicts.

Belt & Road route and sensitive Chinese coastlines



Source: www.beltroad-initiative.com

The history of every empire is first and foremost a road-building exercise. An empire builds roads to bring commodities cheaply into its center and push out higher-value-added finished goods to the far corners of the empire. This is why, in Europe, we say that “all roads lead to Rome”.

Charles Gave

With the BRI China not only tries to forge closer ties with its immediate neighbors, the country also addresses one of its great geo-strategic problems: the lack of access to open seas. China’s northeastern coast line along the Yellow and East China Seas is blocked off by the Korean peninsula and the southern extension of the Japanese chain of islands. Opposite the south-southeasterly coasts line along the South China Sea, the Philippines, Malaysia and Indonesia block access to the open sea. Taiwan is basically positioned like a connecting hinge between these two lines. The volume of trade crossing the South China Sea amounts to around 35% of global trade; furthermore, around 80% of China’s crude oil imports are shipped through the area.¹⁰³ If access points such as the Singapore Strait or the Strait of Malacca were subjected to a blockade, China would soon be brought to a standstill; and obviously, export activities would more or less cease as well.

The Belt route in particular holds out the promise of massive capital inflows for infrastructure and investment projects to nearly all neighboring states bordering this problematic region.

The BRI projects are so numerous and comprehensive that they are accompanied by a number of supra-national cooperation initiatives. Among the participating institutions are above all the Asian Infrastructure Investment Bank (AIIB) and the New Silk Road Fund (NSRF). The Shanghai Cooperation Organization is also

¹⁰³ See “Trade, War, and the South Chinese Sea”, *The Diplomat*, September 1, 2018

taking part. In connection with precious metals, the Silk Road Gold Fund and the Mining Industry Development Fund are worth mentioning.

What is remarkable about all these projects is that none of them are solo efforts by China. The Chinese always seek the inclusion of and cooperation with other countries. This is not only due to the fact that China – so far – still lacks the military clout and the economic influence and economic stability required to sustain solo efforts. **Rather, striving for consensus is a fundamental characteristic of Chinese culture.**

It is no big surprise that gold is clearly integrated in the BRI as well. After all, several of the largest gold producers are in the BRI's "theater of operations"; and of course many of these countries, including the Philippines, Kazakhstan, Indonesia, and the "gold giant" Russia, are in possession of large, so far unmined deposits and reserves.

Gold reserves of central banks and gold deposits of BRI participants in tonnes, Q4/2018

Country	CB gold reserves	Known gold deposits	Key areas
Afghanistan	22	30+	Panj, Samti, Zarakshan
Armenia	0	220	Tukhmanuk, Zod
Azerbaijan	0	400+	Gedabek, Gosha
Bangladesh	14	–	–
Belarus	47	–	–
Bhutan	5	minimal	Jang Pangi
Brunei	4	–	–
Cambodia	12	51	Angkor, Okvau, Phum Syarung
China	1,852	13,100	Shandong
Egypt	78	208	Eastern Desert
Ethiopia	0	900	Benishangul Gumuz
Georgia	0	14	Sadrisi
India	600	71	Hutti, Hira-Buddinni
Indonesia	79	2,000+	Grasberg
Iran	907	320	Zarshuran
Iraq	96	30	Aldajh, Western Desert
Kazakhstan	350	8,000	Komarovskoye, Vasilkovskoye
Kyrgyzstan	11	616	Kumtor
Laos	1	500	Muang Ang Kham
Malaysia	39	50	Terengganu, Kelantan and Pahang
Maldives	4	–	–
Mongolia	19	400+	Gatsuurt, Oyu Tolgoi
Morocco	22	100	Sahara Desert
Myanmar	7	18	Kachin
Nepal	6	15	Bamangaon, Jamarigad
New Zealand	–	140	Macraes, Reefon and Waiha
Pakistan	65	1,200	Reko Diq
Panama	0	373	Colon
Philippines	198	8,000	Didipio, Malibao, Mindanao
Russia	2,113	12,500	Krasnoyarsk, Irkutsk, Magadan, Amur
Singapore	127	–	Acts as financier
South Africa	125	36	Witwatersrand
Sri Lanka	20	10	Ambalantota, Seruwawila
Tajikistan	22	430	Jilau, Pakrut
Thailand	154	200	Palitapan, Kabinburi, and Chatree
Timor-Leste	–	50	Oecussi
Turkey	526	800	Mastra, Ovacik, Uşak- Kışladag
Turkmenistan	5	10	Tourkyr
Uzbekistan	0	5,000	–
Vietnam	10	300	Bong Mieu, Phouc Sun

Source: Silkroadbriefing.com, Incrementum AG

The four largest Chinese gold producer – China National Gold Group, Shandong Gold, Zijin Mining Group, and Shandong Zhaojin Group – have been active in the BRI region for quite some time. In Africa alone, their investments increased from half a dozen to 45 projects between 2012 and 2015.¹⁰⁴ In May 2017 Russia's largest

¹⁰⁴ See "The Chinese scramble to mine Africa", Mining.com, December 15, 2015

gold mining company, Polyus Gold, announced a joint venture with China National Gold Group in order to exploit the largest Russian gold deposit, “Nataalka”.¹⁰⁵ Fu Xiao, head of Global Commodities Strategy of the Bank of China International summarizes the situation aptly:

“In countries and regions involved in the BRI there lies a huge reserve of gold, accounting for a large share of the global reserve...China has already set up a number of projects and joint ventures in these regions. The current focus is on mining; but, in the future, we expect deeper cooperation to emerge across exploration, mining, processing, and trading.”¹⁰⁶

If the BRI becomes a success, it will have many effects. For one thing, it will keep deflationary pressures elevated: Better infrastructure means faster and cheaper transportation of Chinese goods. Furthermore, large regions with favorable wage structures will become accessible.

Build your opponent a golden bridge to retreat across.
Sun Tzu

On the other hand, the initiative will keep demand for commodities such as steel, copper, and cement at a high level as well. China's construction industry creates its own demand, and the Chinese will not only act as financiers for the vast bulk of BRI projects but will also be construction contractors. Thus, the whole exercise is also an economic stimulus program for China's construction industry. It has been alleged that there is a threat that financially less-well-endowed countries participating in the BRI may fall into a “Chinese debt trap”.¹⁰⁷ However, the China Africa Research Initiative of Johns Hopkins University seems relaxed about the issue, at least with respect to Africa: “Currently we do not see Chinese loans as contributing to Africa's debt crisis.”¹⁰⁸ It should perhaps also be noted that the creation of dependency through credit is not exactly a Chinese invention.

Keep your friends close, but your enemies closer.
The Godfather, Part II

Lastly, the BRI harbors the potential for further conflict with the US. The Chinese initiative is inevitably also directed against the US presence in the region, which is quite strong in Central and Southeast Asia in particular. Donald Trump's overtures toward North Korea could well be regarded as a response to the BRI. The BRI is putting the US to the test in another respect as well: Not only does China consider the projects as investments helping to diversify its large dollar-denominated portfolio, but the trade agreements concluded or yet to be concluded with its African and Asian partners are of course all denominated in yuan. From a longer-term perspective, this will undermine the US dollar's dominant position in the countries concerned.

With respect to gold, the BRI is likely to prove extremely useful to China. The large Chinese mining companies particularly stand to benefit. For instance, Zijin Mining Group's gold production abroad already exceeds its

¹⁰⁵ See “Major deal signed with China to explore gold deposits”, *Siberian Times*, Mai 15, 2015

¹⁰⁶ See “Gold firms urged to tap potential of BRI”, *China Daily*, October 25, 2018

¹⁰⁷ See “8 countries in danger of falling into China's 'debt trap'”, *Quartz*, March 8, 2018

¹⁰⁸ See “The Path Ahead: The 7th Forum on China-Africa Cooperation”, *Briefing Paper 1/2018 – SAIS China Africa Research Initiative*, August 2018, p. 1

domestic production by around 16.5 tonnes.¹⁰⁹ Zhang Yongtao, general secretary of the China Gold Association, summarizes the situation as follows:

“The gold industry is already starting to cooperate as part of the B&R initiative. But there is real potential for further gains, through integration at home and development abroad. To that end, state-owned enterprises and private companies can join forces to support the B&R initiative, seeking out countries with rich gold resources and working with them to develop mines and enhance production. China’s gold industry is already in a strong position. But it could become even stronger. International growth [...] will help the industry to become a true world leader with global market influence.”¹¹⁰

Gold in China

“China’s gold market will open up further [...] the long-term outlook is very good.”

Roland Wang
World Gold Council

China’s leaders are aware of the fact that the Chinese dream will probably not be achieved without friction, particularly with other superpowers. They are also aware that the effort will be a marathon rather than a short sprint. Gold plays a crucial role in their deliberations and strategies. Former PBoC chairman Zhou always stressed that he saw gold as a central element of financial markets:

“The establishment and development of China’s gold market marks the basic completion of constructing a market for major financial products in China, including markets for currency, securities, insurance, and foreign exchange.”¹¹¹

To “join the club”, China must play by club rules. The rules of the game say you need a lot of gold to play, but you don’t recognize the gold or discuss it publicly. Above all, you do not treat gold as money, even though gold has always been money.

Jim Rickards

In light of these statements it is clear that China has almost reached its goal of constructing a comprehensive financial industry. What is still lacking is its liberalization and further opening up. To the surprise of many, in 2018 Yi Gang was appointed as the new governor of the PBoC. He is considered Zhou’s protégé, who lived in the US for a long time and, just as his mentor, has always declared himself in favor of a continuation of the reform policy and a further opening up of financial markets. Gang, at the time still director of the state-owned Chinese foreign exchange office (SAFE), commented on the subject of gold as well:

“It is not a bad asset. [...] It would never become a big part of China’s overall investment portfolio. The international gold market is very limited. If I purchase gold on a massive scale, it will definitely push up global gold prices. So, as for suggestions from many friends that we should increase gold

¹⁰⁹ See “China’s gold mining industry: a story of growth”, *Gold Investor*, October 2018, p. 24

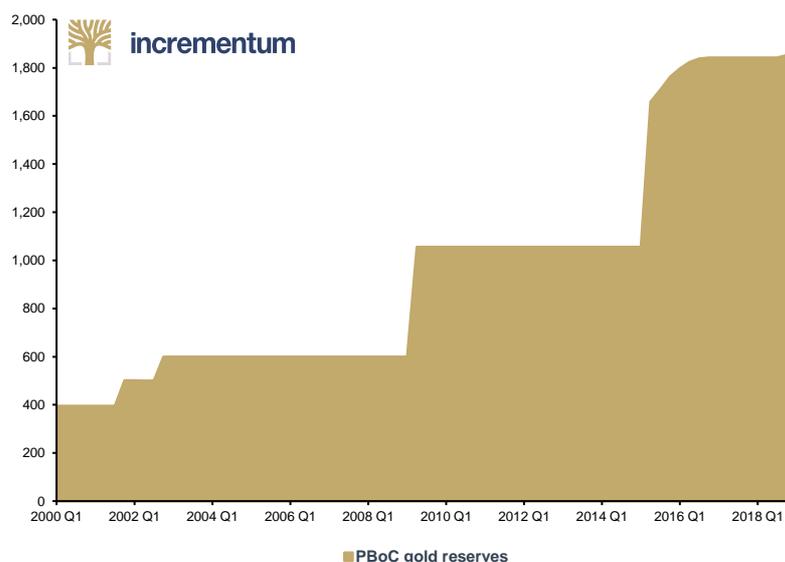
¹¹⁰ See “China’s gold mining industry: a story of growth”, *Gold Investor*, October 2018, p. 25

¹¹¹ See Zhou, Xiaochuan: “Give Full Play to the Gold Market’s Investment and Hedging Functions”, London, 2004

holdings, we will give prudent consideration to this, according to market conditions.”¹¹²

Apparently, Gang has in the meantime concluded that market conditions are favorable. In December, January, and February the PBoC increased its gold reserves for the first time since 2016, by approximately ten tonnes in each month. It appears that a new trend has begun, and Beijing will likely continue to regularly report growing gold reserves.

Gold reserves of the PBoC, in tonnes, Q1/2000-Q1/2019



Source: SAFE, World Gold Council, Incrementum AG



Courtesy of Hedgeye

Since the PBoC has presumably purchased gold regularly in recent years as well, one has to wonder what caused it to change its communications policy?¹¹³

It would seem natural that China is sending a signal to the US in connection with the trade war. But a sober assessment suggests that many aspects of this “war” are in reality a storm in a teacup. The conflict is a useful propaganda device for both the US and China. US president Trump can fulfill his campaign promise and make his mark as a defender of US jobs, while China can blame the US for its weakening economic growth. As Zhou Xiaochuan notes:

“We used a mathematical model to calculate the negative impact of the trade war. It is not very large; it is not significant. It is less than a half-percent impact to the Chinese economy.”¹¹⁴

However, back in 2017, when he was still governor of the PBoC, the very same Zhou remarked:

¹¹² See “China will be prudent in buying gold: official”, Reuters, March 9, 2010

¹¹³ See “PBoC Gold Purchases: Secretive Accumulation on the International Market”, Bullionstar, no date

¹¹⁴ See “Trade war impact on China insignificant”, CNBC, September 7, 2018

“China’s financial sector is and will be in a period with high risks that are easily triggered. Under pressure from multiple factors at home and abroad, the risks are multiple, broad, hidden, complex, sudden, contagious, and hazardous. The structural unbalance is salient; law-breaking and disorders are rampant; latent risks are accumulating; [and the financial system’s] vulnerability is obviously increasing. [China] should prevent both the “black swan” events and the “gray rhino” risks.”¹¹⁵

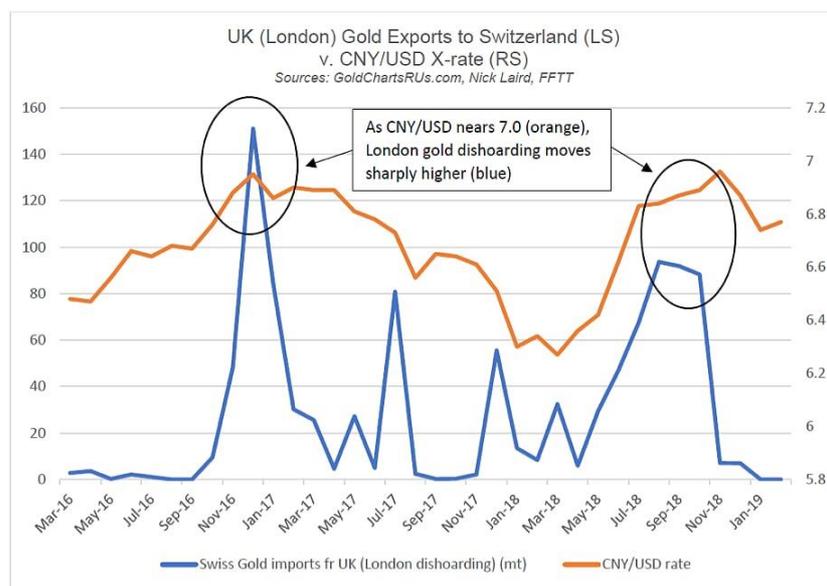
The difference between owning a paper contract or claim on gold versus holding the metal itself, while seemingly trivial, is a hugely significant one. The idea of owning a paper claim on physical gold, however, is viewed very differently in the West than it is in East.

Grant Williams

This is where the answer can probably be found. The economy has definitely cooled down recently and the CNY has noticeably weakened as well, and not just in reaction to the trade war. China sees rising risks, and by boosting its gold reserves it provides greater stability to its currency and financial system.

It would fit this pattern that Beijing apparently “hedges” the CNY with physical gold. Ever since CNY was included in the special drawing rights currency basket of the IMF, large outflows of physical gold from London could be observed every time the CNY/USD exchange rate closed in on the level of 7 CNY per USD. The outflows only diminished once the exchange rate of the currency pair had stabilized.¹¹⁶

UK (London) gold exports to Switzerland, and CNY/USD exchange rate 2016-2019

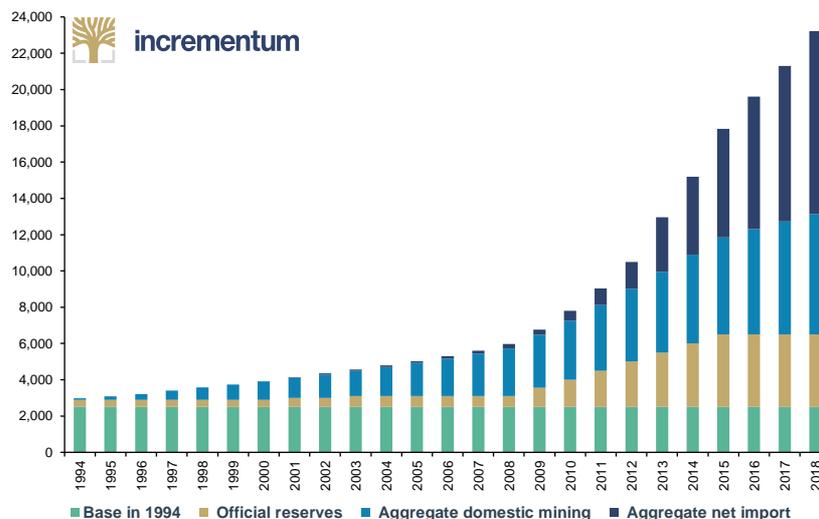


Source: FFTT, Luke Gromen

But not only the PBoC is buying gold. Chinese households have also accumulated impressive amounts of gold since private gold ownership was legalized again. Bullionstar out of Singapore currently estimates that total gold ownership in China amounted to around 23,000 tonnes in the end of 2018.

¹¹⁵ See “China’s Central Bank Governor Warns About Financial Risks — Again”, *The Diplomat*, November 9, 2017
¹¹⁶ See “London gold inventory appears to be serving as a ‘governor’ on CNY/USD depreciation”, FFTT, LLC, February 14, 2019

Total gold reserves held in China (estimated) in tonnes, 1994-2018

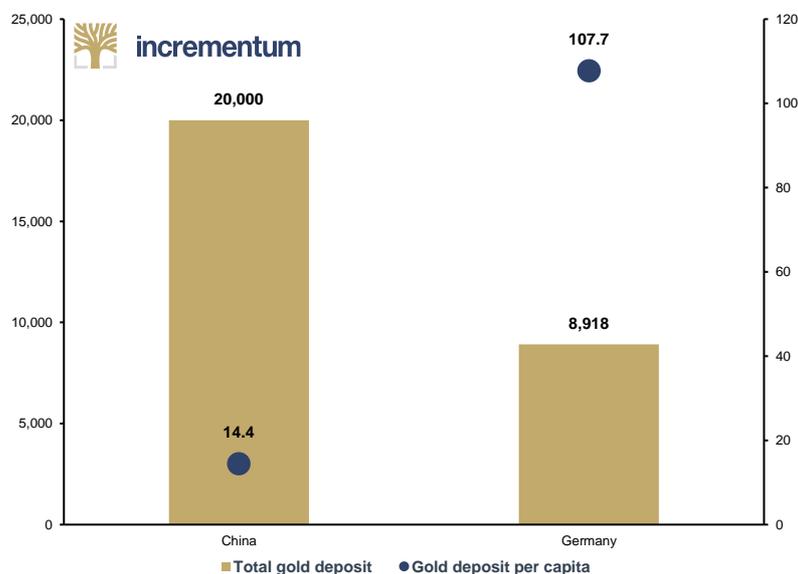


Source: BullionStar.com, Incrementum AG

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

However, this number is put into perspective if one looks at it in conjunction with the enormous number of Chinese citizens. Even if one proceeds from the extremely optimistic assumption that private households have hoarded an additional 4,000 tonnes since 2017,¹¹⁷ the Chinese would own less than half an ounce of gold per capita on average, while Germans own three ounces per capita on average.

Privately held gold in China (estimate) and Germany, total in tonnes (left hand scale), and per capita, in grams (right hand scale), 2019



Source: ReiseBank, CFin Research Center Steinbeis-Hochschule Berlin, Incrementum AG

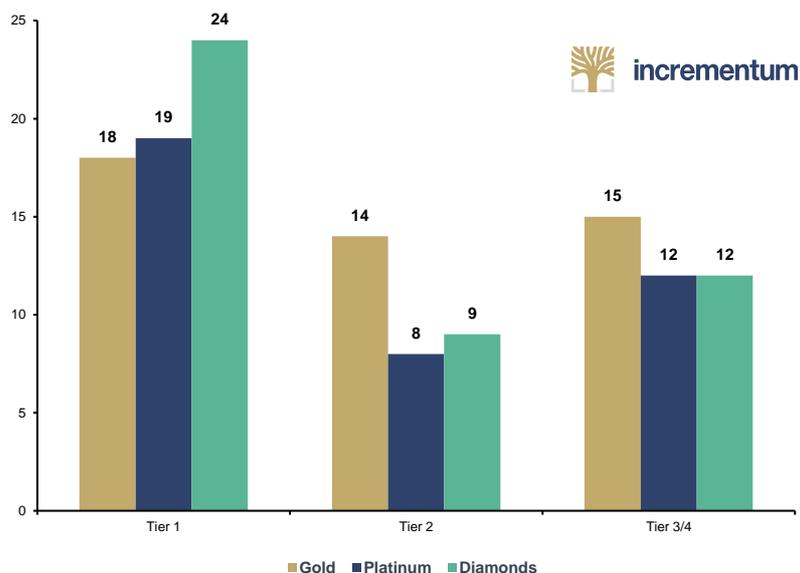
Based on this, China's gold consumption definitely has additional room for growth. At this juncture it still consists primarily of jewelry consumption and reached a three-year high of 652 tonnes in 2018.¹¹⁸ It is important to consider that the

¹¹⁷ In both 2017 and 2018 a little over 2,000 tons of gold were delivered via the SGE.

¹¹⁸ See "Gold Demand Trends, Full Year and Q4 2018", World Gold Council, 2018, p. 3

segment of the country's population that is most fond of gold is not the wealthy young inhabitants of the coastline but the inhabitants of tier 3 and tier 4 cities as well as the rural population.¹¹⁹ The situation of the latter in particular is addressed by the recent 5-year plan: The rural population should be the foremost beneficiary of the planned build-out of infrastructure and other government initiatives.

Purchasing decisions of Chinese women if given CNY 5,000 for consumption, 2018



Source: World Gold Council, Incrementum AG

Nevertheless, the population of the large metropolitan areas could still contribute to growing gold demand as well, particularly in connection with gold as a financial product. A study undertaken by the Development Research Center of the State Council (DCR) in cooperation with the World Gold Council provides the following assessment of the situation:

“Pension funds and insurance companies, for example, do not have the opportunity to benefit from the financial security gold can add to a portfolio, unlike their overseas counterparts. We propose that regulators change the rules to allow institutional investors, such as pension and insurance funds, to invest in gold.”¹²⁰

In view of the rising amounts that China's insurance industry can invest and the fact that gold can be used as a portfolio stabilizer and a hedge against other risks in China,¹²¹ it seems likely that the relevant regulations will be adjusted accordingly in the medium term. If Chinese insurers were able and willing to shift just 5% of their assets under management (as of 2017) into gold, it would result in additional

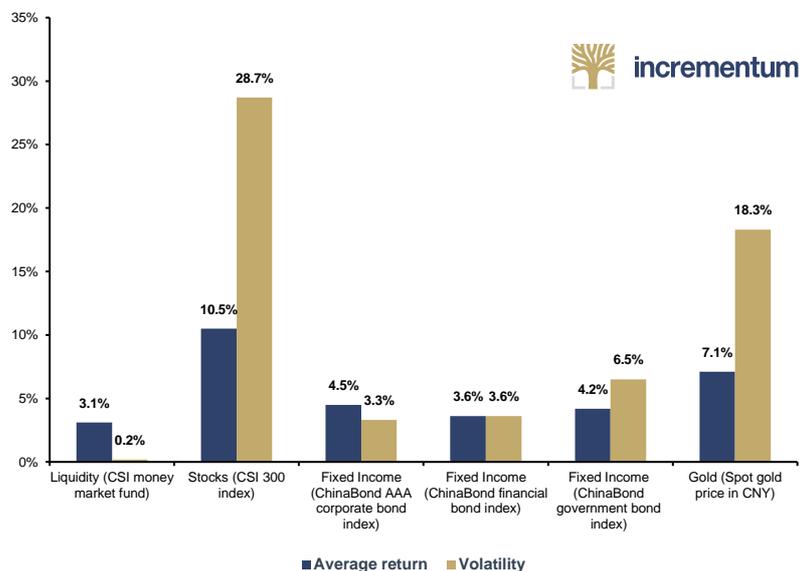
¹¹⁹ See “Potential for growth in China's jewellery market”, *Gold Investor*, October 18, 2018

¹²⁰ Zhang, Chenghui und Chen, Daofu: “Recommendations for the further development of China's gold market”, June 2018, p. 10

¹²¹ See “Potential for growth in China's jewellery market”, *Gold Investor*, October 18, 2018

demand worth USD 125bn, or around 92.6mn ounces at a gold price of USD 1,350/oz.

Average return of Chinese assets, in %, 2007-2017



Source: World Gold Council, Incrementum AG

China – At the Crossroads?

“We will hold high the banner of socialism with Chinese characteristics.”

China's 13th 5-year plan, Chapter 2

[T]he Chinese want to de-dollarize. But they want also to keep their capital account closed. There is a very astute solution the Chinese have found: China says “If you have too many CNY because you have been selling a lot of oil to China, you can keep your CNY in your reserves, fine with us. Or we can give you gold instead of CNY.”

Charles Gave

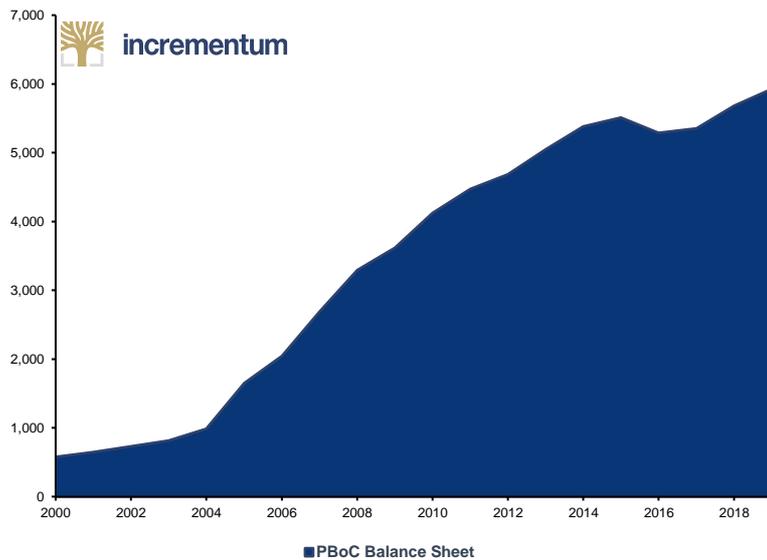
China has experienced a meteoric rise over the past 30 years. The pronounced decline of extreme poverty on our planet is largely attributable to the ascent of China. Slowly but surely, though, China is approaching a crossroads. While catching up from a backward situation is a remarkable feat, it is nevertheless a comparatively simple exercise. Techniques and technology are known and basically just have to be copied and applied. The huge domestic market remains relatively closed due to protectionism; but also, as a result of the pronounced cultural differences between China and the rest of the world, it has given the country's rise a shot in the arm. But to outpace the rest of the world, take the lead, and then maintain and defend that leading position is a very different and far more difficult feat. China is unlikely to succeed with this effort if it keeps using the methods it has employed up until now.

The country will have to open up further. The reform path must be maintained; and concurrently, Chinese companies will have to become more innovative, efficient, and productive on a broad front. It appears doubtful that this can be implemented in the near future, not least in view of the high levels of debt created by the shadow banking system and cumbersome state-owned enterprises, which are doing well primarily on account of subsidies and protectionism. Whether China

has the will to maintain reforms when faced with a rougher economic climate also remains to be seen.

On closer look, the risks to China are quite high. In last year's *In Gold We Trust* report we had already dealt with them extensively.¹²²

PBoC balance sheet, in USD bn, 2000-2019



Source: Bloomberg, Incrementum AG

As early as 2004, the PBoC began to significantly expand its balance sheet, and the Chinese upswing since that time has been largely credit-driven. As a result, China is also confronted with the problem of diminishing marginal benefit: New debt generates less and less economic growth, and so the ever-growing debt wheel has to be turned faster and faster. Then there is demographics. The number of people of working age (15-59 years) is already falling.

Dig the well before you are thirsty.

Chinese Proverb

The temptation to counter an economic downswing by increasingly turning back to closed markets and protectionism and boosting exports via exchange-rate manipulation will be great – not least as there is an unspoken agreement between the people and the party: You may become wealthy, but in exchange we remain in power. Whether the people will silently accept a significant loss of wealth that inevitably comes as one result of a major economic crisis is anything but a safe bet.

However, the country cannot easily go back to what it once was, either – by now it has become too tightly integrated with the rest of the global economy. Moreover, China's citizens have become used to the liberties accompanying increasing prosperity. Lastly, all lip service to socialism to the contrary, China's leadership seems well aware that market economies are more successful in the long run. The core statements of the 13th five-year plan indicate as

¹²² See "Possible Crisis Triggers and Catalysts", *In Gold We Trust* report 2018

*When the winds of change blow,
some people build walls and
others build windmills.*

Chinese Proverb

*Be not afraid of growing slowly;
Be afraid only of standing still.*

Chinese Proverb

much, as does the appointment of a free-market liberal like Yi Gang to succeed Zhou Xiaochuan as governor of the PBoC .

With respect to gold's trend, one could well regard both the reform and conservative scenarios as having a silver lining, so to speak. Should China remain on the path of growth and reform, rural areas are bound to benefit the most in coming years. That is precisely where the segment of China's society with the greatest penchant for gold lives, but it is the segment that hitherto lacked the income to engage in conspicuous consumption. With growing prosperity and further financial reform, Chinese investment portfolios are likely to become more broadly diversified, as well. Gold will then be better able to fulfill its role as a financial diversifier and anchor. In this scenario private buyers would be driving demand growth.

Should the extant risks and imbalances in China come to the fore, Beijing will be bound to rely to a greater extent on gold – not least as a means of stabilizing its currency. In this case most of the demand would be exercised by the government.

Up until now China's leadership has done many things right. Its projects and initiatives are meshing like well-oiled gears, complementing and supporting each other. In recent years China has managed to offer its services as an alternative, trustworthy partner – especially in Central and South Asia as well as in Africa – who is exclusively interested in trade and profit and pursues no extraneous agenda. In view of the loss of trust the West is increasingly experiencing at all levels, the Chinese approach seems to be the correct strategy, at least so far.

However, rougher winds are likely to begin blowing in the realm of foreign policy as well. The attitude of the West is changing and may be reversing entirely, after years characterized by its latent underestimation of China, during which time it indulged the country with respect to the opening of its markets. It seems unlikely that China will now change its behavior and adopt a much faster pace of reform or begin to increasingly act on its own. **Beijing is more likely to hark to the advice given by Deng some 40 years ago: “One has to be far-sighted”.**

Exclusive Interview with Jim Rogers: “Whenever you see problems, remember weiji [危机]!”

Jim Rogers is a superstar in the commodities world and a favorite of readers of the *In Gold We Trust* report. He is a renowned adventurer and traveler and the author of six books. Having retired at 37 from international investing, he now lives in Singapore with his wife and two daughters, where he keeps a keen eye on the ever-shifting sands of our global economy. This interview was conducted at Jim’s home in Singapore on April 30, 2019.



Jason Nutter, Representative of the *In Gold We Trust* report Asia, with Jim Rogers in Singapore

You have been in Asia now for more than 10 years. Are you still enjoying it? How has my country been treating you?

I have lived here full time since 2007, but I have been coming to Asia since before you were born! I am keen on Asia. I moved to Asia because of Asia. Asia is the place to be in the 21st Century and will probably be so for the 22nd Century as well, so we are very happy to be here.

You mentioned in your fantastic book Street Smarts that the 1970s was the decade for commodities. 1980s for Japan. 1990s for internet stocks. What will the 2020s be about?

Survival. Mainly about survival. We are going to have very serious problems in the economy and financial markets. I guess we will all be trying to survive. We have had, throughout history, long periods when financial markets were great, and periods when they were not so good places to be in. We are now entering a period where it will be tough once again. It is going to be difficult times.

In 2008 we had a problem because we had too much debt. Since then, debt has skyrocketed everywhere. People have spoken about austerity, but no one has yet practiced austerity. China didn't have debt for decades, but even China now has debt. Be worried.

Why do you think cultures that traditionally saved aggressively, like the Chinese one, would take a turn and start taking on large amounts of debt?

I don't have a definite answer, but maybe the fact that China had no debt for decades, and now all of a sudden with credit being made available, it makes things feel easier. It feels wonderful when you don't fully understand the consequences of taking on debt. It is easy to borrow money and not think too much about paying it back. That being said, China has been around for a few thousand years and it has had debt in its history

Anybody who has had a capitalist system knows about bad times. Children growing up in these systems hear about the horror stories of people going bankrupt. In China today, children don't grow up hearing those stories because there hasn't been debt to reckon with for a long time. Their great-great-grandparents would know about these stories, but the current generation are not as well aware. That is the only explanation that comes to my mind.

Sounds like it is cyclical?

It always has been. We have always had long periods where financial times were great, and times when they weren't. We have had around 40 years of easy pickings for the financial community, and that will come to an end. It always has.

I do plenty of work in and around China and am in awe of the place. It's scale, the culture, and the mindset of the people. I ask people to visit whenever China comes up in conversation. What would you say to people about China today and where it is heading?

You should have gone to China 50 years ago, and you would have seen how dramatically different things are now. Deng Xiaoping started changing things in 1978, and it is no longer the same country today.

China is the only country in recorded history that has had recurring eras of greatness. Rome, Egypt and Great Britain were all great once, but China has been at the absolute top 3 or 4 times in history. China has also collapsed and experienced catastrophe 3 or 4 times, but they are the only country that we know of that has been able to come off the bottom and get back to the top again. I do not know why this occurs, but they are on the rise again.

There will be setbacks along the way, just as America experienced on its way to becoming the most successful country in the 20th Century. America went through 15 depressions, a horrible civil war, few civil rights, and massacres in the streets. It was a terrible mess, yet we got to the top. I am not sure why, but everybody, every

country, every individual and every family that rises experiences problems along the way, and China is not going to be different.

The Chinese have a Mandarin word that does not exist in English (because we have not been around as long as the Chinese), which is *weiji* [危机]. Translated directly it means disaster could be an opportunity or an opportunity could be a disaster. In any case, disaster and opportunity go hand in hand. Whenever you see problems, remember *weiji*.

I like that; I will keep it in mind. You mentioned that the century we are living in is Asian. With the turmoil going on, and anti-globalization coming to the fore, would you still recommend non-Asians invest and even immigrate to Asia at this point in time?

Immigrating is never easy, even when you are immigrating in your own country! If you live in the east in America and you move to the west, it is not going to be easy. This is even more so when you move to a different country or continent. I cannot recommend that to anybody, as it is an important decision that they have to make themselves. If they did it on my account and it turned out to be a disaster, they would blame me! It is a major decision, but it was good for us, and we are glad we did it. Would it be a good decision for others? I have no idea.

I will however say that throughout history, people have migrated all over the world. Often the people that have immigrated are people finding themselves at the bottom, and they end up finding a better life. It is harder to move when you are at the top, but if you are at the bottom you might find it a simpler decision to make.

You majored in history at Yale, so I would really like to get your take on this: Whenever financial systems have gone through large changes, paradigm shifts if you will, gold has usually played a role, with it being a good portal to transport wealth through a transitional period. Will it be different this time?

Throughout history, when governments have collapsed or currency/money have collapsed, people have always turned to gold and silver. Maybe they shouldn't (many professors say they shouldn't), but who cares, that is what they do. So yes, it will be a good portal, although gold has long periods where it does nothing. It is not a panacea. Gold has long periods where one will lose money holding onto it.

I have owned gold for a long time, but you go back in history and you will understand that gold will not make you rich unless you get the timing right. If you do get the timing right, gold will save you when everybody else is collapsing.

Everybody should have some gold as an insurance policy. Just like with health insurance, car insurance and fire insurance, you hope you never need to use your insurance but you are happy that you have it as a protection. Everybody should have some gold and silver as insurance if nothing else. You might even make money if you get the timing right. Even if you get the timing wrong, you should have some gold and silver as insurance.

Silver as well?

Well, silver has been around as long or in some cases longer than gold. In the Christian religion, Jesus was sold for 30 pieces of silver and not for gold! The American constitution in the 1790s was based on silver not gold. Gold is great, but so is silver. Silver has certainly been extremely important and popular in many places throughout history. One advantage of silver: it is easier buy groceries with it. You are not going to get change when times are bad and you hand over a gold coin for some bread.

You mentioned that you are not a buyer of gold at today's prices. What about silver?

The two metals usually move somewhat together. There are huge fluctuations in relative values over the past ten thousand years, but if gold is going up, silver will be rising, too, albeit maybe at different rates.

Is there a price point where gold would be attractive for you again?

Panics and bottoms look the same. It doesn't matter what the asset is. When people are dumping bullion, panicking and begging to get out of their gold, that is usually a good sign that it is time to buy. It does not always happen, but it has certainly happened a few times in my lifetime. **In my view, I expect gold to go under USD 1000 an ounce – but it may not! If it does in some kind of panic selloff, I hope I am smart enough to buy a lot of gold.**

As we discussed earlier, before this is over, people are going to be begging to buy gold and silver. They will certainly become overpriced again, and might even turn into a bubble. I hope it doesn't go that way because you have to sell bubbles, and I would rather my children have my gold and silver as an insurance for their future. But, you always have to sell bubbles if it gets that bad.

How do you see the future for your children? Will times be good again?

It is always going to get good again someday; the world will not come to an end. If – in a metaphorical sense – it does, you should definitely have some gold!

As a historical example, the financial community was not a great place to be between 1929 and 1979. For those 50 years, being in Wall Street or the City of London was not great. Since then, it has been fantastic to be in the financial industry. Again, we are looking at long cycles. So when the economy changes again this time, we can expect things to be bad for a prolonged period.

I would suggest that people look back at history and realize that maybe it is time for a long period of a lack of exuberance.

You mentioned that the near future will be one where "survival" will be the priority. Are we talking only about financial survival, or something more serious?

People always look for someone to blame when times get tough; they rarely blame themselves. Politicians make things worse, as they usually end up blaming foreigners for the predicaments they find themselves in. Foreigners make easy scapegoats, since they have different skin, hair, languages, foods, and religions.

Throughout history, social unrest, civil strife, riots, revolts and rebellion frequently occur when the economy is poor. This has happened repeatedly, and will happen again in the future. I hope that they don't happen where I am, but they always happen, especially in hard times.

Are you still bullish on commodities, even in this uncertain environment?

I am optimistic about agriculture because it is so depressed. It is a nightmare!

The average farmer in America is 58 years old. More people in America study public relations than agriculture. In Japan, the average age of farmers is around 66. The highest rate of suicide in the UK is in agriculture. Millions of Indian farmers have committed suicide over the past few decades. I could go on and on. It is a disaster. Remember *weiji* – when there is a disaster there is often an opportunity.

I would suggest one learn about how to be a farmer, or about agricultural commodities. Other than agriculture, I am patiently waiting for opportunities. I am more optimistic about them than other things at the moment.

Any words of advice to friends or family that are in or entering retirement today, with such a low-interest-rate environment currently being the norm?

Be extremely careful. What many people are doing now is to reach for yield. Higher yields mean exposure to higher risks, which unfortunately many people don't understand. **If someone is offering to give you 6% interest, you should probably run the other way!**

If you know what you are doing (I am not sure if I know what I am doing), you could own Russian bonds, for instance. They have a high yield, but I would be very careful buying them. Do not make the mistake of blindly seeking yield, because you could lose everything.

There is no easy answer. The solution is to cut back to have less income, but nobody wants to hear that. We are going to have a problem and the next few years will not be so good for all of us. Interest rates will go higher, but it is going to take awhile. Remember, if it is too good to be true, it is not true, so be careful.

What would you do, if you found yourself as a 35-year-old Jim Rogers today?

In 1984 I went to China for the first time. I saw what was happening in the 1980s, but I did not stay. I went back to New York and had a fabulous time. If I was really smart, I would have moved to China and stayed.

If I were 35 today, I would definitely move to China. Asia is the place to be in the next 100-200 years, so I would definitely move to Asia.

You are an explorer, an adventurer and serial self-reinventor. What is the next adventure that you are going to embark on? What is getting you curious in 2019?

At the moment it is my children. I thought children were a horrible waste of time and money, and felt sorry for people that had children. It turns out I was completely wrong!

I would rather spend time with them than on anything else. Maybe if they wanted to drive around the world one day or across China, we would do that. They speak Mandarin, as you know, so we could have that for an adventure. They are not so little anymore; they are 11 and 15; but that is my current adventure.

Girls are great! I hope the child you are about to have will be a girl!

I will let you know in a few weeks, Jim. Thank you so much for your time.

Be well, Jason, it was fun, and give everyone working on the *In Gold We Trust* report my best!

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De-Dollarization: Europe Joins the Party

*“The dollar is a big lie.
But a very liquid lie!”*

Rick Rule

Key Takeaways

- The US’s aggressive policy under Donald Trump is undermining confidence in the US dollar as the reserve currency. In the short term, however, Trump has the best hand, because in a crisis investors still flock to King Dollar.
- Europe has taken the new US sanctions against Iran as an opportunity to expand the euro’s infrastructure. Brussels wants to secure the second spot and establish the common currency as a fully-fledged alternative to the US dollar in the medium term.
- Gold plays an important role for central banks. In 2018 they added more gold to their reserves than in any year during the last five decades. 2019 will also be a year of strong gold demand from Europe and Asia.

A suitcase full of euros

“The U.S. dollar system was founded at Bretton Woods on three pillars: American military supremacy, American financial hegemony, and American economic prowess. The U.S. is now the world’s largest debtor instead of the world’s largest creditor. China has supreme military, financial, and economic power in expanding concentric circles. Russia is carving out its own sphere of economic and military influence. Europeans now use the Euro. As American power continues to ebb, the dollar will become increasingly unable to rely on geopolitical support.”

Daniel Oliver, Myrmikan

Omar al-Bashir was president of Sudan for 30 years until he was overthrown by the military in April 2019. The coup was preceded by months of protests by the Sudanese. Bashir was seen by many as a dictator. The International Criminal Court wants to indict him for his role in the genocide in Darfur.

A currency can rise to global significance very quickly. The US dollar’s position may look secure for now, but there is no guarantee the US currency will retain its top slot in the longer term.

Will Denyer

But before he can be extradited to Europe, the ex-president must answer to his own people. The interim leadership is currently collecting evidence against Mr. Bashir. Money is at the center of the investigation. Bashir would not be the first African ruler to use his position for personal gain. In his residence, investigators found several millions of dollars of cash in a suitcase. This description evokes a scene that we have all seen hundreds of times on television and in the cinema. A suitcase is opened, revealing neatly stacked green US dollar bills. In the current case, however, it was different. The bills were not green but purple and yellow. Bashir had hoarded his millions not in US dollars, but in euros. Five million EUR in cash.¹²³

Welcome to 2019. The US dollar is no longer the only global currency, neither in the reserves of the central banks, in payment transactions, in the energy market, or in the hiding places of the criminals of this world. It is still dominant, no question. It is supported by the most stable political system, the largest army, and the biggest and most liquid financial markets, which in combination make the US dollar unique. But every year the challengers gain strength.

¹²³ “Suitcases stuffed with \$6.7M in cash reportedly found at home of Sudan’s ousted president”, Fox News, April 21, 2019

Game of Thrones, currency edition

“A lion does not concern himself with the opinion of sheep.”

Lord Tywin Lannister, *Game of Thrones*

The euro should reflect the political, economic, and financial weight of the euro area.

**Valdis Dombrovskis,
EU Currency Commissioner**

In the “World War of Currencies”, as the German journalist Daniel D. Eckert called it, there are no simple truths.¹²⁴ This is perhaps the most complicated struggle that is currently affecting the markets. The battle for the future of the world monetary system is not a shallow action film but more like *Game of Thrones* – a complex series with hundreds of actors and locations, stretching over decades and demanding full concentration from the viewer.

When we started documenting the process of de-dollarization for the *In Gold We Trust* report three years ago, we were almost the only voices covering this topic. That has changed. The subject has established itself. And in the past 12 months it was Brussels that suddenly became active on the currency issue.

Around the celebrations of the 20th anniversary of the euro, some of the “big heads” in the European Union openly criticized the supremacy of the US dollar as a world reserve currency. This is a turning point. Suddenly awareness of de-dollarization has found its way into the mainstream. Despite years of dealing with the issue, it was almost a shock for us when at the end of 2018 even public television in Austria reported widely on the subject: “EU wants to end dollar dependence”, read the report.¹²⁵

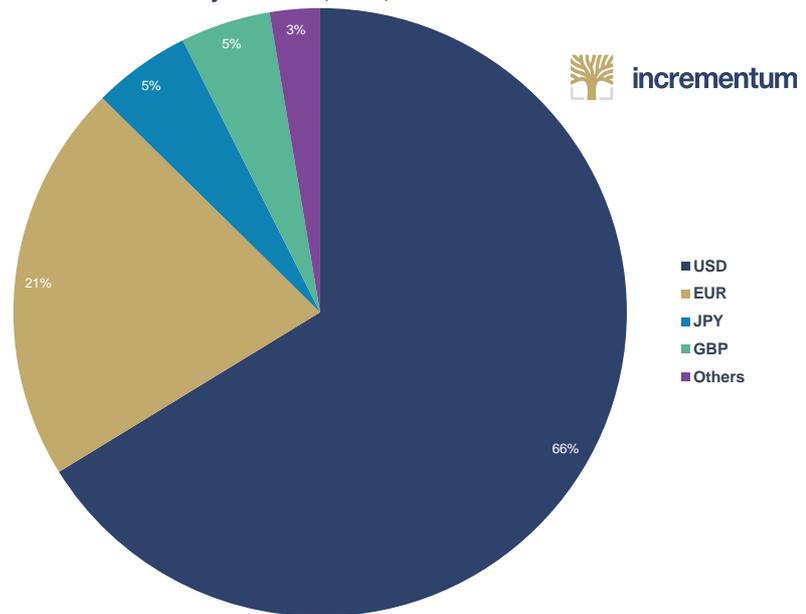
That was new, not only because the mainstream media only very, very rarely focuses on a monetary topic like this in its reporting, but also because the EU – unlike China, Russia, and other countries – has not shown any open ambitions to replace the US dollar with the euro.

The background to the news was an initiative by the EU Commission around the turn of the year. And it wasn’t just words. There were actions. Will the euro overthrow the US dollar within a few months? No, of course not. But it has moved several steps in that direction. **The euro should finally be perceived as a serious alternative to the US dollar in (energy) markets, by the media, politicians, and voters.**

¹²⁴ See Daniel D. Eckert: *Weltkrieg der Währungen*. 2010

¹²⁵ “EU wants to end dollar dependence”, orf.at, December 5, 2018

Breakdown of currency reserves, in %, 2017



Source: Statista, Incrementum AG

The bottom line is that what has been true for decades still applies. The US dollar continues to enjoy the confidence of markets, governments, and central banks. But faith in the dollar weakens a little every year. And gold plays a major role in this slow departure from the US dollar. Global central banks have recently bought more gold than they have in decades.

History shows that leading currencies are not thrown from the throne from one day to the next.

Thomas Fuster

Europe, China, Russia and many small countries set new initiatives every year to make themselves independent. But for the world financial system, none of them offer a viable, fully-fledged alternative to the US dollar yet, which is why any news of the death of the US dollar is definitely exaggerated.

The renowned *Neue Zürcher Zeitung* writes:

“Ultimately, however, the dollar benefits above all from the network effect. This effect reinforces the status quo. What does that mean? Because the dollar has been the global reserve currency for almost a hundred years and is now used by a large number of players, there is a great incentive to use the dollar again and again when conducting international business.”

“The dilemma of the rivals: The euro is a currency without a state – and the renminbi is a currency with too much state.”¹²⁶

¹²⁶ “Dem Dollar wird der baldige Untergang prophezeit – das ist stark übertrieben”, (“The dollar is predicted to disappear soon – that’s a lot of exaggeration”), *Neue Zürcher Zeitung*, December 15, 2018, our translation

The megatrends of de-dollarization

“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

In this chapter, we will describe the main trends in de-dollarization and provide an overview of what each country and region is doing to minimize its dependence on the US dollar.

Here is an overview of the current megatrends:

- More and more countries are looking for **alternatives to the US dollar**, whether they are trading in other currencies, accumulating reserves of non-US dollar currencies, or purchasing gold.
- Major players such as China, Russia and now also Europe are taking steps to undermine the US dollar system, such as the **establishment of alternative payment systems**.
- Many politicians and central bankers complain that the US is using the **US dollar as a weapon**. At the same time, the behavior of the USA is becoming more aggressive, and the use of this “Dollar weapon” can be observed more frequently.
- Even in the American mainstream, more and more voices are warning that the US dollar will not remain the leading currency forever. Among them are such prominent players as **Goldman Sachs** and **Blackrock**.
- The opponents of the US dollar cite **the US turning away from gold in 1971 as a historical mistake**, demonstrating the importance they still attach to the precious metal.

Europe’s small uprising

“The euro must become the face and instrument of a new, more sovereign Europe.”

Jean-Claude Juncker

Since the Greek crisis of 2012, the American media have often given the impression that the EU and the euro have already broken up or are about to break up. This is not the case. Twenty years after its creation in

1999, the euro area is larger than ever. Greece has not exited, Italy did not collapse. Of course, nothing is perfect in the EU. The debt problems of the southern states have hardly improved. There are reforms, but they are progressing only slowly. The structure of the euro zone itself is also often criticized and described as being in need of renovation.

For months now, Berlin and Paris have been negotiating a budget for the euro zone. At the same time, the ECB, under its Italian President Mario Draghi, is looking for a way out of ultra-loose monetary policy. All these are the issues that shape everyday life in the EU.

Against this backdrop, the celebrations to mark the 20th anniversary of the euro were not particularly large and pompous. But there was a lot of talking going on. EU Commission President Jean-Claude Juncker was the loudest. In his “State of the Union” speech in September 2018, he called for a stronger role for the euro in the international monetary system – and he did bring facts.

“[The euro] is now the second most used currency in the world with 60 countries linking their currencies to the euro in one way or another. But we must do more to allow our single currency to play its full role on the international scene.”¹²⁷

We must do more so that our single currency can play its full role on the international stage.

Jean-Claude Juncker

The euro currently accounts for around 20% of global currency reserves. This amount exceeds the euro zone’s share of global economic output. Around 36% of global payments are already made in the euro. The US dollar is at 40%. The EU imports oil and gas worth around EUR 300bn annually. But 80% of these are still invoiced in US dollars today. Juncker called this situation “absurd”, in view of the fact that only 2% of energy imports come from the USA. “It is also absurd that European companies buy European planes in dollars instead of euros”, he added.¹²⁸

Europe’s new self-confidence does not just fall from the sky. In past *In Gold We Trust* reports, we have already documented several times that players such as Russia and China have supported the euro from the outset. In recent years, all three have intensified their efforts to detach themselves from the US dollar. These are visible signs of an uneasiness that has built up over decades. ¹²⁹

The *Neue Zürcher Zeitung* writes:

“The hegemony of its currency brings tangible benefits to the US, such as lower financing costs and higher profits from money creation. There has therefore never been a lack of envy. Legendary is the quote of the former

¹²⁷ Juncker, Jean-Claude: “State of the Union 2018 – The hour of European sovereignty”, September 12, 2018, p. 10

¹²⁸ Juncker, Jean-Claude: “State of the Union 2018 – The hour of European sovereignty”, September 12, 2018, p. 10

¹²⁹ See “Past, present and future of currency architecture”, *In Gold We Trust* report 2017; “De-dollarization: Goodbye Dollar, hello Gold?”, *In Gold We Trust* report 2017; “De-dollarization - From US-Dollar via Yuan and Euro to Gold?”, *In Gold We Trust* report 2018

Top priority is to receive cash and oil payments in euros.

Safar-Ali Karamati
 Deputy director of the
 National Iranian Oil
 Company

French President Valéry Giscard d'Estaing, who once attested the USA an 'exorbitant privilege'.¹³⁰

But the trigger for Juncker's speech and the subsequent steps by the EU Commission was the withdrawal of US President Donald Trump from the "nuclear deal" with Iran. This deal had been negotiated by his predecessor Barack Obama and his foreign minister John Kerry as a kind of peace treaty. This was probably more about the US dollar than about Iran or its nuclear program. China, Russia, and Europe had relied on Washington's promise to stop using the US dollar as a weapon and were bitterly disappointed. Under Trump, this practice was not only resumed, but also expanded.

The US dollar as a weapon

"The Trump administration is increasingly using the dollar – and access to dollar clearing and financing – as a geopolitical weapon, risking retaliation and perhaps even endangering the future of the dollar-based global monetary system."

William White, OECD economist

Why Europe, China, and Russia are speeding up the process of de-dollarization can be understood only if the significance of the Iran deal is properly understood. First, Iran could become an important trading partner and energy supplier for Europe. The same applies to China. But Iran is, above all, a case study in what Washington can do to you if you expose yourself to the US dollar for better or for worse.

When you want a deal real bad, you will get a real bad deal.

T. Boone Pickens

Tehran would not, of course, be considered particularly US-friendly. But in order to participate in international trade, the Iranians had to rely on the US dollar and the SWIFT system, which handles international payments. SWIFT belongs to an international banking consortium and is even based in Belgium – within the EU. Nevertheless, the USA was able to build up enough pressure to exclude Iran from SWIFT.

That's what the governor of the Oesterreichische Nationalbank (OeNB), Ewald Nowotny, means when he says:

"The United States is massively using the dollar as a weapon. In connection with the unilateral enforcement of sanctions. This is particularly important in the oil business. An invoicing of the oil price in dollars is forced. And with every transaction in dollars one is obliged to follow the American sanctions

¹³⁰ "Die Dominanz des Dollars weckt Unmut", ("The Dominance of the Dollar Arouses Displeasure"), *Neue Zürcher Zeitung*, April 4, 2019, our translation

against Iran, for example. Even if the USA is not directly involved in a trade. For example, when it comes to oil exports to a European country.”¹³¹

Companies that have interests in the US and do not adhere to the rules and sanctions of the US can get into trouble – even if their actions are completely legal in their own countries.

Jean-Claude Trichet

With the Iran deal signed by Great Britain, Germany, France, Russia, China, the EU, and the USA, this phase was believed to be over. Therefore, this Joint Comprehensive Plan of Action (JCPOA) was a peace treaty. **But Donald Trump broke the peace in May 2018. What’s more, he has managed to get SWIFT to expel Iran again.** That was a shock to the other signers of the deal. And explains why the EU, China, and Russia have since taken several concrete steps to finally abandon the US dollar system. For example, the conclusion of bilateral agreements to use one’s own currencies or the establishment of independent payment systems bypassing the US dollar.¹³²

In this way, countries reduce their dependence on the US dollar and strengthen their own currency. But above all they make themselves a bit less vulnerable to sanctions from the US. It is now crystal clear that these sanctions can affect not only Iran but also China, Russia, and even the EU and its member states.

German Foreign Minister Heiko Maas writes in the *Financial Times*:

“Europe should not allow the US to act over our heads and at our expense. For that reason, it is essential that we strengthen European autonomy by establishing payment channels that are independent of the US, creating a European Monetary Fund and building up an independent SWIFT system.”¹³³

More and more, we’re conducting transactions in national currencies – including the ruble, the euro, Chinese yuan and such.

Anton Siluanov
Russian Deputy Prime Minister

Germany and Austria are currently feeling the fury of the US in connection to the pipeline Nord Stream 2. Washington wants to prevent the completion of the pipeline from Russia to Germany, which is already under construction, at all costs – and threatens those involved with sanctions.¹³⁴ European banks such as BNP Paribas and Commerzbank had to pay heavy fines for violating US sanctions against Iran, Cuba and Sudan.¹³⁵ **This is the first time that Europeans have felt what China and above all Russia have been struggling with for a long time. The experience will weld them together.** Or, as Bloomberg puts it:

“Iran is only a convenient pretext: The nuclear agreement is one of the few things that unite the EU, China, and Russia against the U.S. But working to undermine the dollar’s global dominance isn’t ultimately about Iran at all. In his recent State of the European Union speech, European Commission President Jean-Claude Juncker called for strengthening the euro’s international role and moving away from traditional dollar invoicing in foreign trade. China and Russia have long sought the same thing, but it’s only

¹³¹ “Ewald Nowotny: Die USA setzen den Dollar als Waffe ein”, (“Ewald Nowotny: The US are using the dollar as a weapon”), Die Presse, December 21, 2018, our translation

¹³² See “Swift Caves To US Pressure, Defies EU By Cutting Off Iranian Banks”, Zero Hedge, November 7, 2018

¹³³ “Europe calls for global payment system free of US”, *Financial Times*, August 21, 2018

¹³⁴ See “USA drohen OMV wegen ‘Nord Stream 2’ mit Sanktionen”, (“USA threatens OMV with sanctions because of ‘Nord Stream 2’”), orf.at, March 17, 2019, our translation

¹³⁵ See “Our currency, your problem’: The US has made a weapon of the dollar”, *Sydney Morning Herald*, September 7, 2018

with Europe, home of the world's second biggest reserve currency, that they stand a chance of challenging American dominance.”¹³⁶

Iran as a decisive factor

“Potentially, the most dangerous scenario would be a grand coalition of China, Russia and perhaps Iran, an ‘anti-hegemonic’ coalition united not by ideology but by complementary grievances. It would be reminiscent in scale and scope of the challenge posed by the Sino-Soviet bloc, though this time China would likely be the leader and Russia the follower. Averting this contingency, however remote it may be, will require a display of U.S. geostrategic skill on [all] perimeters of Eurasia simultaneously.”

Zbigniew Brzezinski, *The Grand Chessboard*, 1997

The story of INSTEX perfectly illustrates the difficult relationship between the EU and the US, which under Donald Trump has turned to much more aggressive trade, economic, and foreign policy than under his predecessor Barack Obama. Following the termination of the Iran deal, the US, as already mentioned, rebuilt enough pressure to get the SWIFT consortium to exclude Iranian banks from international payments,¹³⁷ and European banks and companies were threatened with sanctions if they continued to trade with Iran.

*To talk much and arrive
nowhere is the same as climbing
a tree to catch a fish.*

Chinese Proverb

Suddenly the EU took action. For the first time since the introduction of the euro, the idea of a separate payment agency was put forward.

INSTEX is this agency. The abbreviation stands for “Instrument in Support of Trade Exchanges”. Washington intervened again during the preparatory work. For example, it managed to prevent INSTEX from being established in a small, neutral country such as Austria.¹³⁸

In the end, Angela Merkel and Emmanuel Macron took things into their own hands. The agency will be based in Paris. The German banker Per Fischer is going to be its first boss. An interesting detail: The third member of the alliance is Great Britain, of all countries, which is currently leaving the EU. It seems that the rage over Donald Trump’s actions is also welding rivals together. The fact that China and Russia have promised INSTEX support should come as no surprise.¹³⁹

¹³⁶ “Europe Finally Has an Excuse to Challenge the Dollar”, Bloomberg, September 25, 2018

¹³⁷ See “Swift Caves To US Pressure, Defies EU By Cutting Off Iranian Banks”, Zero Hedge, November 7, 2018

¹³⁸ See “Berlin und Paris wollen Vehikel für Irangeschäft”, (“Berlin and Paris want vehicles for Iran business”), *Die Presse*, November 27, 2018, our translation

¹³⁹ See “Europa legt sich mit König Dollar an”, (“Europe invests with King Dollar”), *Die Presse*, February 4, 2019, our translation

What exactly the agency should do, however, is still unclear. It is most likely to be imagined as a “black box” in which business between Iran and Europe can be conducted without the curious looks of the US and without using the US dollar. Originally, only a few goods were involved, for example from the Health sector, a circumstance that in turn has caused anger in Tehran. In the meantime, Washington wants to phase out the previous exemptions for Iran’s oil exports.¹⁴⁰ So it is quite possible that INSTEX will also handle energy trade in the future.

The idea behind the agency is simple: If the US doesn’t know who is doing business with Iran, there can be no sanctions against individual companies. And the large EU states are certain that Trump will shy away from sanctions against countries like Germany or France.¹⁴¹

The Trump administration is increasingly using the dollar as a weapon to pursue foreign policy goals.

Klaus Regling

Klaus Regling’s comments also show how intense the anger in Europe has become in the meantime. He is the head of the European Stability Mechanism (ESM). His institution is considered a candidate for the role of a European Monetary Fund. Another topic that is now being actively addressed in Brussels, the US dominance of the International Monetary Fund (IMF), has also been a thorn in Europe’s side for a long time.

At the end of 2018, Regling said that it was time “to strengthen the international significance of the euro”, noting that “It is not a question of replacing the dollar, but of contrasting it with something of equal value”. Like others before him, the German speaks of a “multipolar system” based on three to five currencies – so, for example, on the US dollar, the euro, and the renminbi. Regling also complains, “The Trump administration is increasingly using the dollar as a weapon to pursue foreign policy goals.” He adds, “The fact that we Europeans trade crude oil on a dollar basis is not a law of nature.”¹⁴²

This is a particularly delicate point. The European payment system is only one step. It is logically followed by a euro-based energy market. For the first time since the introduction of the euro as book money 20 years ago, Europe is now taking action to tackle energy trading.

The situation is indeed “absurd”, as Commission President Jean-Claude Juncker put it: Europe imports crude oil and gas worth around EUR 300bn annually. But according to the EU Commission, 80% to 90% of those imports are accounted for in US dollars. Yet the US supplies only a tiny part of the energy Europe needs. About one third of Europe’s energy comes from Russia, one third from Africa and the Middle East, and about 20% from Norway.

The global energy market sees an annual trading volume of around USD 40trn. More than 90% of this amount is accounted for by oil. And this trade has been conducted almost exclusively in US dollars for 50 years. Only in recent years have countries such as Russia, China, Iran, and some African and

¹⁴⁰ See “Deadline For Iranian Oil Waivers”, NPR, May 2, 2019

¹⁴¹ See “France and Germany Step in to Circumvent Iran Sanctions”, *Wall Street Journal*, November 26, 2019

¹⁴² “Europa bäumt sich gegen die Dominanz des Dollar auf”, (“Europe rebels against dollar dominance”), *Der Standard*, November 29, 2018, our translation

Europe's most important energy supplier, Russia, is anxious to get rid of the dollar – and some companies are already demanding payments for oil in Euros because of the risk of sanctions.

Elina Ribakova

European countries switched to trading in their own currencies. Russia and China, in particular, are very active in this area and are now also trading with each other in other areas with rubles and yuan.

The changes these countries are making are part of the practical implementation of de-dollarization that we are reporting on here. They are gradually destabilizing the monetary order that has prevailed since the 1970s. Even states that pay for their energy imports only in US dollars hold their other currencies in their reserves as well. Energy trading is and remains an important factor on the way to a multilateral monetary world, even though the USA itself has now become an important producer of oil and gas.¹⁴³ So writes Elina Ribakova from the European think tank Bruegel:

“Since the historic 1974 agreement between the US and Saudi Arabia, most of the energy trade has been dominated in US dollars – the largest buyer (the US) and the most important supplier of oil (Saudi-dominated OPEC) at that time agreed to trade oil in dollars. However, the centre of gravity has since shifted towards Europe and Asia. The US has become the largest producer of oil, albeit so far remaining a lightweight in exports. Europe and China are by far the largest importers...”

OPEC has also evolved. To the surprise of most, OPEC now de facto includes Russia as an important partner, following the historic visit by King Salman bin Abdulaziz Al Saud of Saudi Arabia to Moscow in October 2017. Many of the oil exporters either no longer have their currencies pegged to the dollar or are exploring different options.”¹⁴⁴

Washington doesn't like cartels like OPEC. But then how can you have a market dominated by one currency – the dollar?

EU working group on the energy market

For the EU, Bruegel proposes a step that China has already taken: the introduction of an oil fixing in euros. The EU Commission has also made a number of proposals and called on the member states to use the euro more strongly as a currency in energy trading. Representatives of European oil and gas companies have been discussing further steps in a working group since the beginning of the year.¹⁴⁵

No message of love from Moscow

“I firmly believe that the misuse of the role of the US dollar as an international currency will ultimately undermine its role.”

Sergey Lavrov,
Russian Foreign Minister

Russia is much further along the path to de-dollarization. Nobody else is as open as Russia's President Vladimir Putin is when it comes to turning away from the US

¹⁴³ See “Öl ist nun die Waffe der USA”, (“Oil is now the weapon of the USA”), *Die Presse*, April 23, 2019, our translation

¹⁴⁴ “How the EU could transform the energy market: The case for a euro crude-oil benchmark”, Bruegel, February 13, 2019

¹⁴⁵ See “EU brings industry together to tackle dollar dominance in energy trade”, Reuters, February 13, 2019

dollar. At the end of November 2018 he stated the following at the VTB Capital Forum in Moscow:

“We aren’t ditching the dollar, the dollar is ditching us. The instability of dollar payments is creating a desire for many global economies to find alternative reserve currencies and create settlement systems independent of the dollar. We’re not the only ones doing it, believe me.”¹⁴⁶

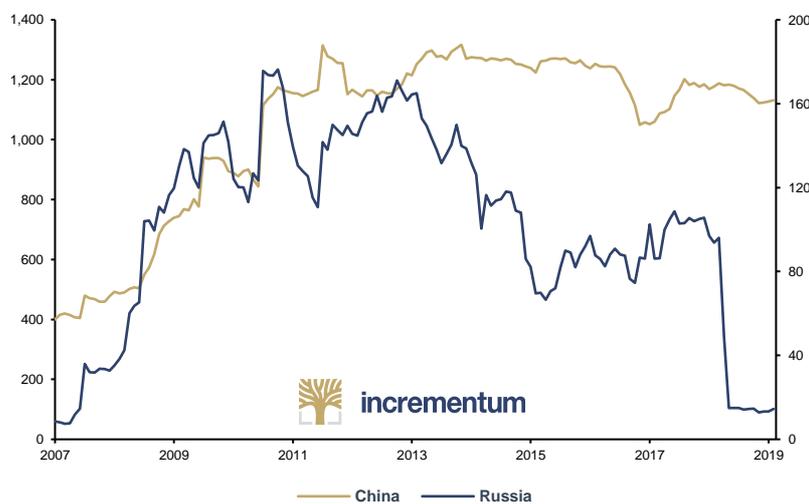
What I’m saying is that these debts should be in gold. Because at this point the karat of gold is unlike anything else. The world is continually putting us under currency pressure with the dollar.

Recep Tayyip Erdoğan

In fact, successful trade always requires two parties. Russia has mainly raw materials and weapon systems to offer. Last year, for example, S-400 missile systems were delivered to NATO state Turkey – under fierce protest from Washington – and without the use of the US dollar. Also between Russia and India, weapons systems are now traded in rupees and rubles – and no longer in US dollars. This shift is a direct consequence of the US sanctions against Russia, which are supposed to prevent such deals. Instead, they only undermine the position of the US dollar.¹⁴⁷

Russia, China, and other countries have been working on alternative systems to replace SWIFT far longer than Europe has. Russia also issued government bonds in euros at the end of 2018 – for the first time in more than ten years. And at the beginning of the year it became known that Russia had sold off US Treasuries worth just over USD 100bn and switched its reserves into euros and yuan.¹⁴⁸

US-Treasury holdings, in USD bn, China (left scale), Russia (right scale), 2007-2019



Source: Bloomberg, US Treasury Department, Incrementum AG

In the summer of 2018, the Russian central bank had already reduced the share of the US dollar in its reserves to 24%. The euro is now number one with 32%. The Chinese renminbi now stands at almost 15%. At the same time, some Russian

¹⁴⁶ “US ‘Shooting Itself’ with Steps That Harm Dollar, Putin Says”, Bloomberg, November 28, 2018

¹⁴⁷ See “Russia And India Ditch Dollar In Military Deals”, Zero Hedge, June 19, 2018

¹⁴⁸ See “Russia ditches Dollar, opts for Euro and Yuan”, Euractiv, January 11, 2019.

I say again: Russia is a gas station masquerading as a country.

John McCain

energy companies demand payment in euros, which in turn has a direct impact on initiatives in the EU.¹⁴⁹

Russia exports about USD 600bn worth of energy per year. Despite Putin's efforts, three-quarters of this amount is still being settled in US dollars. Even the Russian economy is not always enthusiastic about the Kremlin's attempt to break away from the US dollar. Putin cannot therefore simply throw all the US dollar reserves onto the market. Russia also needs the global reserve currency to participate in global trade. In other words, Russia can push ahead with its own de-dollarization only if the rest of the world participates, especially in the energy sector.¹⁵⁰ The British *Economist* writes:

"The Russian economy remains heavily dependent on commodities, which are typically traded in dollars: nearly 70% of its exports are processed in the currency. Although the share of rouble- and yuan-denominated transactions has been growing, the finance ministry reckons three-quarters of bilateral trade with China still rides the greenback. Ending the dollar's dominance is not so easy."¹⁵¹

But this dollar-dependence does not stop Russian President Vladimir Putin from continuing to sharply criticize US policy. While Russia, China, Europe, and other countries increasingly rely on their own currencies and gold, Putin warns Donald Trump:

"Regarding our American partners placing limitations, including those on dollar transactions, I believe is a big strategic mistake. By doing so, they are undermining the trust in the dollar as a reserve currency."¹⁵²

So it is not economic arguments such as extremely loose monetary policy or quantitative easing that are mentioned by opponents of the US dollar – but instead dwindling confidence in the US as a partner and thus in the currency, which has dominated our financial system for more than five decades.

Criticism of the petrodollar deal

"The fate of reserve currencies is to decline over time."

Martin Murenbeeld

It is fitting that the central banks have recently bought more gold within one year than they have in any year since 1971. It was in that

¹⁴⁹ See ["Russian oil firm seeks payments in Euros amid US sanction threat"](#), Euractiv, September 20, 2019

¹⁵⁰ See ["Russland findet: Zum Teufel mit dem Dollar! Doch so einfach ist das nicht."](#), ("Russia finds: To hell with the dollar! But it's not that simple."), *Neue Zürcher Zeitung*, October 23, 2018

¹⁵¹ ["Ditching the dollar: The Central Bank of Russia shifts its reserves away from the dollar"](#), *Economist*, January 17, 2019

¹⁵² ["US 'Shooting Itself' With Steps That Harm Dollar, Putin Says"](#), Bloomberg, November 28, 2018

If they have dollar, we have our Allah.

Recep Tayyip Erdoğan

watershed year, of course, that US President Richard Nixon broke gold's link with the US dollar – without first asking the European partners for their opinion.

In the following years, the system was created that we still have today, the basis of which is the petrodollar deal with Saudi Arabia. A “milestone pact”, the petrodollar agreement landed on the front page of the *New York Times* on June 9, 1974, just a few days after the signing:

“American officials, commenting on the first such arrangement between the United States and an Arab country, said that they hoped the new accord would provide Saudi Arabia with incentives to increase her oil production and would serve as a model for economic cooperation between Washington and other Arab nations. ...

Secretary of State Kissinger and Prince Fand Ibn Abdel Aziz, Second Deputy Premier of Saudi Arabia and a half-brother of King Faisal, signed the six-page agreement at Blair House across the street from the White House this morning.”¹⁵³

These six pages would change the world. The dominant position of the US dollar was cemented for decades. And Washington still has an allergic reaction whenever other power blocs, such as Europe, Russia, or China, interfere in energy trading or even want to use their own currencies.

Gold will not always get you good soldiers, but good soldiers can get you gold.

Niccolò Machiavelli

For decades the petrodollar deal was hardly known to the public. Only now, when it is increasingly questioned and criticized, its details come to light. In previous *In Gold We Trust* reports, we have already emphasized the importance of the Bloomberg story of May 31, 2016, in which the background to the negotiations was disclosed for the first time. The deal is described as follows:

“The goal: neutralize crude oil as an economic weapon and find a way to persuade a hostile kingdom to finance America’s widening deficit with its newfound petrodollar wealth. And according to Parsky, Nixon made clear there was simply no coming back empty-handed. Failure would not only jeopardize America’s financial health but could also give the Soviet Union an opening to make further inroads into the Arab world.”¹⁵⁴

Three years later, the subject has engaged the political world. We have already described Europe’s efforts to establish the euro as an energy currency. But it is only against the background of the years 1971 to 1974 that the historical significance of this advance becomes truly tangible. Remember the reports of Europe’s small uprising against the US dollar:

¹⁵³ “‘Milestone Pact’ is Signed by US and Saudi Arabia”, *New York Times*, June 9, 1974

¹⁵⁴ “The Untold Story Behind Saudi Arabia’s 41-Year US Debt Secret”, Bloomberg, May 31, 2016

I do not believe for one second that the stability of the gold price in renminbi, the creation of a renminbi-denominated oil futures market, the quasi-stability of many Asian currencies against the renminbi, the outperformance of the Chinese bond market and the opening of the Chinese bond market to foreigners were a series of random events. On the contrary, I believe that they were part of a well-designed plan to make sure that the US could not blackmail China.

Charles Gave

“The European Union is set to unveil plans for challenging the dollar’s dominance in global markets, including energy, as it seeks to strengthen the international role of its currency and become more independent from the U.S. amid a widening rift in transatlantic ties. ...

The commission’s plans are aimed at mitigating the so-called ‘exorbitant privilege’ of the U.S. dollar, which allows Washington to force global compliance with its foreign policy goals, including by the EU.”¹⁵⁵

Martin Selmayr is Secretary General of the EU Commission and is considered one of the most powerful Germans in Brussels. On June 10, 2018, he posted the following message on Twitter. In it he summarizes the attitude of Europe very concisely – and closes the arc from 1971 to today:



Martin Selmayr ✓
@MartinSelmayr

On 15/8/1971 Pdt Nixon used TV (a new medium at the time) to unilaterally end US commitment to the BrettonWoods system. Europe had to react, started work on a Monetary Union which eventually led to the €. Europe needs to take its destiny in its own hands.

[Tweet übersetzen](#)



Nixon Ends Bretton Woods International Monetary System
On August 15, 1971, President Nixon announced on TV 3 dramatic changes in economic policy. He imposed a wage-price freeze. He
[youtube.com](#)

Europe has not forgotten the past. It has been working for 50 years on a future in which alternatives to the US dollar can be found. One of those alternatives is the euro. The other one is gold. **The euro system holds around 11,000 tonnes of gold in reserve, almost 3,000 tonnes more than the USA officially owns.**

¹⁵⁵ [“Here’s How Europe Plans to Challenge the Dollar’s Dominance”](#), Bloomberg, December 3, 2018

Central banks turn to gold

“Well, it’s interesting, gold is still significant. I ask myself, if gold is a relic of a long history, why is \$1 trillion worth of gold held by central banks worldwide plus the IMF and other financial institutions? If it’s worthless and meaningless, why does everyone still own it?”

Alan Greenspan, April 2018

A bar of gold always retains its value, crisis or no crisis. This creates a sense of security. A central bank’s gold stock is therefore regarded as a symbol of solidity.

De Nederlandsche Bank

The gold purchases of the international central banks are rarely an issue for the mainstream media. But when it became known at the beginning of this year that the central banks had recently bought more gold in 2018 than they had since 1971, that revelation was worth some headlines. Don’t forget: By 2010, global central banks had been selling gold for years. Only since then have they been turned into net buyers, and in so doing they deprive the market of physical gold.¹⁵⁶ In 2018 alone they bought 651 tonnes of gold. This figure corresponds to an increase of 74% over the previous year.¹⁵⁷

And in May of this year, after the first quarter was also particularly strong, the US news agency Bloomberg framed the situation in the clearest of terms:

“Central banks are ditching the dollar for gold.

“First-quarter gold purchases by central banks, led by Russia and China, were the highest in six years as countries diversify their assets away from the US dollar.

“Global gold reserves rose 145.5 tonnes in the first quarter, a 68 percent increase from a year earlier, the World Gold Council said Thursday in a report. Russia remains the largest buyer as the nation reduces its U.S. Treasury holdings as part of a de-dollarization drive.”¹⁵⁸

A total of 16 countries have accessed the gold market since the beginning of 2017.¹⁵⁹

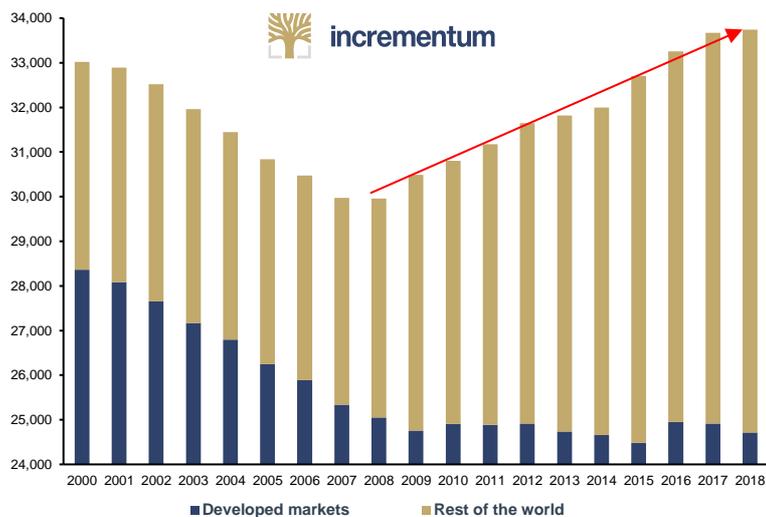
¹⁵⁶ See [“The Portfolio Characteristics of Gold”](#), In *Gold We Trust* report 2018

¹⁵⁷ See [“Central Banks Are on the Biggest Gold-Buying Spree in Half a Century”](#), Bloomberg, January 31, 2019

¹⁵⁸ [“Central Banks Are Ditching the Dollar for Gold”](#), Bloomberg, May 2, 2019

¹⁵⁹ See [“Central Banks Snapping Up Gold: Hungary, Poland New Buyers”](#), Kitco News, November 2, 2018

Gold holdings of central banks, in tonnes, Q4/2000-Q4/2018



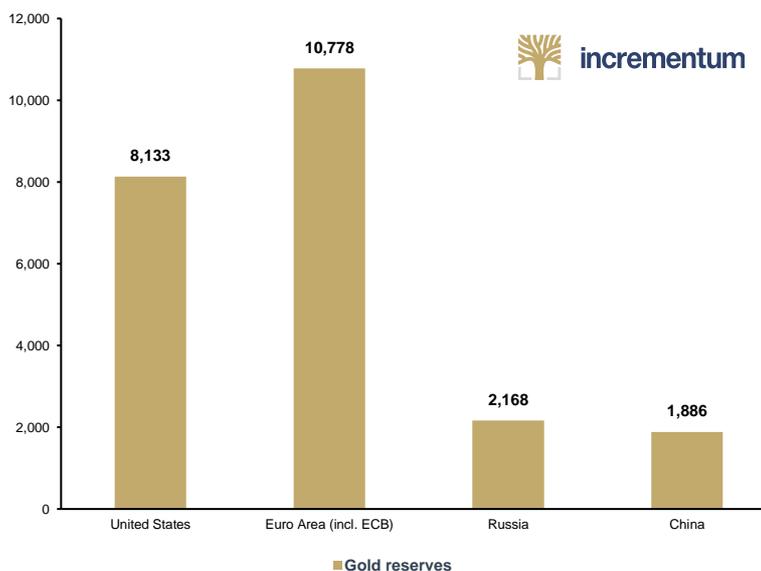
Source: World Gold Council, Incrementum AG

After seeing 650 tonnes purchased in the previous year, the analysts of the World Gold Council expect purchases of around 600 tonnes again this year. But the numbers alone only tell half the story. You also have to ask yourself *why* the central banks are such hard-working gold buyers.

The answer is de-dollarization. We have already shown that more and more countries are slowly losing confidence in the current US dollar-dominated system. Gold, which many central banks now include in their balance sheets at market value,¹⁶⁰ offers an alternative. It is indeed the only truly neutral asset available to governments and central banks. Around a third of the world’s gold holdings are held in the vaults of central banks.

¹⁶⁰ The euro system recognises gains and losses arising from gold price movements in ‘revaluation accounts’, which means that book gains arising from price appreciation are not distributed as profit.

Gold reserves, USA, Euro area (incl. ECB), Russia, China, in tonnes, 05/2019



Source: World Gold Council, Incrementum AG

Nobody describes the banks’ rationale better than DNB, the central bank of the Netherlands:

“Shares, bonds and other securities are not without risk, and prices can go down. But a bar of gold retains its value, even in times of crisis. That is why central banks, including DNB, have traditionally held considerable amounts of gold. Gold is the perfect piggy bank – it’s the anchor of trust for the financial system. If the system collapses, the gold stock can serve as a basis to build it up again. Gold bolsters confidence in the stability of the central bank’s balance sheet and creates a sense of security.”¹⁶¹

America becomes self-aware

“The dollar’s dominance may outlast the Trump era, but it is not inevitable. If the president continues to hack away at America’s institutions, the dollar, too, will suffer. This might end up becoming one of the biggest scars the administration leaves on the American economy.”

Eswar Prasad

The Fed is my biggest threat... because they are raising rates too fast.

Donald Trump

You’ve got to hand it to Donald Trump: He actually succeeds in doing things that one would have thought impossible before. His aggressive foreign policy and the fact that he is using the US dollar as a weapon are the reasons that, for the very first time, the US mainstream is openly talking about the likelihood that the US dollar may one day no longer be the sole reserve currency. A possibility that used

¹⁶¹ “DNB’s gold stock”, De Nederlandsche Bank, as of May 1, 2019

Trump's 'America First' Puts the Dollar Last.

Deutsche Bank

to be at most hinted at or even dismissed as conspiracy theory is now being openly discussed.

Commentators receive additional fodder for concern from the US President whenever he openly attacks the Federal Reserve and questions its monetary policy. Trump is thus additionally damaging the US dollar from within, while the administration's trade and sanctions policy is undermining confidence in the US dollar as a stable and neutral world currency. Economist Eswar Prasad writes in the *New York Times*:

"Finally, Mr. Trump's open attacks on the Federal Reserve could hurt its credibility. Households, firms and investors trust the Fed to do what's necessary to manage inflation, even if that means taking politically unpopular decisions such as raising interest rates when the economy is growing fast. When the president says that the Fed is 'crazy' and 'out of control' or comments that he is 'not happy' or 'disappointed' with the Fed's rate decisions, he could cause irreparable damage. Investors' confidence in the Fed as an institution that is unmoved by shifting political winds is essential to keeping the dollar strong."¹⁶²

And the *New York Times* is not alone in its observation. **The major players on Wall Street have also become aware of the issue after Russia began selling US government bonds at the end of 2018.** The Russian central bank has sold at least USD 85bn of its USD 150bn US dollar assets, says Goldman analyst Zach Pandl. With a 63% share of international currency reserves, the US dollar fell to its lowest level for years, while the relative importance of the euro, yen, and yuan increased. Goldman's Zach Pandl continues:

"The sanction risk seems to explain a significant part of the observed decline. The dollar's share of reserves could fall further if other large reserve holders were to make changes over time similar to those made by the Central Bank of Russia."¹⁶³

And then there's Larry Fink, founder and CEO of BlackRock, the world's largest asset manager. He also brings the issues of budget deficits and public debt into play. The US dollar's status as the world's reserve currency will not be sustainable forever, Fink said in the summer of 2018. He also said that a dispute with China could not be a good idea against this backdrop because Beijing is sitting on the largest holdings of US government bonds:

"Generally, when you fight with your banker, it's not a good outcome. ... I wouldn't recommend you fight with your lenders, and we're fighting with our lenders. Forty percent of the U.S. deficit is funded by external factors. No other country has that."¹⁶⁴

¹⁶² "How Trump Could Fatally Weaken the Dollar", *New York Times*, October 14, 2018

¹⁶³ "Goldman Says Dollar's Reserve Position Hit by US Sanction Risk", Bloomberg, October 16, 2018

¹⁶⁴ "World's Largest Asset Manager Warns: The Dollar's Days As Global Reserve Currency Are Numbered", Zero Hedge, November 7, 2018

The most difficult challenge for the aspiring issuer of the new international currency was the creation of a deep, liquid, and stable secondary market in the relevant financial assets.

Barry Eichengreen

There are very, very few American economists who openly address the issue of US dollar dominance. It almost seems as if there's a ban on such talk, an omerta, if you will. Berkeley Professor Barry Eichengreen, a proven currency expert, is not going along with this.¹⁶⁵ **For several years now, he has been warning of the danger that the US dollar could one day lose its status.** His vision of the future also coincides with that seen by Europe, Russia, and China: The US dollar will not be replaced from one day to the next. Instead, we move from a unipolar system to a multipolar system in which several lead currencies exist simultaneously. Eichengreen is also one of the very few US economists to give the euro a real chance:

“Europe has made progress in drawing a line under its crisis and the economy is growing again. Markets in euro-denominated assets are growing larger and more liquid.”¹⁶⁶

The fact is that the euro occupies a solid second place behind the US dollar in the statistics. Increased use as a currency in energy trading would also strengthen the euro's position as an international reserve currency. But like practically all economists, Eichengreen is skeptical as to whether the EU's fragmented political system can serve as the basis for a global currency. The euro still accounts for only 20% of global currency reserves.

Unlike Europe, China is governed in an extremely centralized manner. Here, too, there are question marks. The yuan's share of the currency reserves is just 2%. Eichengreen notes:

“Every true global currency in the history of the world has been the currency of a democracy or a political republic, as far back as the republican city-states of Venice, Florence, and Genoa in the 14th and 15th centuries. China knows they need to do political reform to strengthen rule of law and the reliability of contract enforcement. Will that without democratization be enough to support a leading role for the renminbi? We've never been there before, but China has done many things other countries have not succeeded in doing before. I wouldn't rule out [that] they can do this too.”

“You want a strong and reliable government that implements predictable policies that are investor friendly. Meanwhile, the United States is doing erratic things and there's no European government but rather a collection of governments trying to cooperate on a capital markets union. Maybe China becomes the attractive issuer.”¹⁶⁷

¹⁶⁵ We want to recommend Barry Eichengreen's book "How Global Currencies Work. Past, Present and Future", Barry Eichengreen, Arnaud Mehl & Livia Chitu.

¹⁶⁶ "The dollar's days as the world's most important currency are numbered", Quartz, December 11, 2017

¹⁶⁷ "The dollar's days as the world's most important currency are numbered", Quartz, December 11, 2017

Conclusion

“Look back into the past, with its changing empires that have risen and fallen, and you can also predict the future.”

Marcus Aurelius

We are made wise not by the recollection of our past, but by the responsibility for our future.

George Bernard Shaw

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

Winston Churchill

There is one thing one should not forget, because it obviously plays an important role in Donald Trump’s thinking. The advantages of a reserve currency are not limited to the fact that companies in the country can calculate more easily and are not exposed to exchange-rate fluctuations. The reserve currency is always also a safe haven for investors. And the US still hasn’t lost the confidence of the markets despite all the actions of Donald Trump. The US dollar markets are still by far the largest and most important in the world.

Donald Trump is therefore playing with the fear of another financial crisis. Because, as we already saw in 2008, investors always flee to the king and not to the challengers. This is also the reason why China is so reluctant to internationalize the yuan and make it convertible. They want to prevent a massive capital flight.

Only the next major crisis will show whether the euro, the yuan, or gold will really be able to do any harm to the leading currency status of the US dollar – or whether the US dollar still has enough life left in it to prevail. Until then, the creeping loss of confidence in the dominant currency of the past seven decades is likely to continue.

This erosion of trust in the US and its dollar means that the central banks will continue to buy gold on a regular basis. The EU and China will continue to improve infrastructure such as payment systems around the euro and yuan. There will be further intergovernmental agreements to bypass the US dollar in bilateral trade, and Donald Trump’s aggressive foreign policy will further accelerate all these efforts.

Even today, the US dollar no longer stands all alone as the currency in which the world’s trade is done. The introduction of the euro has established an alternative for the first time. But there are still many question marks about the euro – and even more about the Chinese yuan. **The answers to these questions will determine who might inherit the US dollar’s enviable reserve currency status at some point.**

Highlights: 20 Years Later – a Freegold Project: Interview with “FOFOA”

“What will change is how we view money and wealth. Everything else in Freegold flows from that!”

FOFOA

Key Takeaways

- There is a group of “physical gold advocates” that have a completely unique view on money, the energy markets and gold. They believe, we are entering a new monetary and financial system in which gold will displace the most conservative types of investments, those used by passive savers.
- The term they use for this system is “Freegold”. The theory dates back to the late 1990ies when a mysterious writer showed up in online gold forums. He called himself “Another“ and wrote about the gold market in a way no one before or after could. Many still consider him a genuine insider.
- We have conducted an extensive Interview with the most high profile writer who is still actively exploring “Freegold”. He uses the pseudonym “FOFOA”. In this extensive interview he explains “Freegold” like never before and calls for a much, much higher price of gold.

The whole interview with FOFOA is almost 50 pages long. We will publish some highlights here, and make the full version available for download on the following website:

<https://ingoldwetrust.report/igwt/freegold/?lang=en>

Without further ado, here are the highlights:

FOFOA on how the Freegold view on gold is different from the “classic goldbug” view:

For A/FOA, gold is the master proxy for real wealth, meaning not money, but the actual wants and needs that contribute to our standard of living. That's real wealth, useful things, and gold is the useless proxy we can save and exchange for those things in the future.

To goldbugs, on the other hand, gold is the rhetorical proxy for a whole menu of other metals, commodities, hard assets, and shares in the companies that produce them. When goldbugs talk about gold, they're really talking about gold and silver... and platinum and palladium and rhodium and mining shares and so on. You'll often hear goldbugs say things like “silver is like gold on steroids,” but you'll never see A/FOA say anything like that.

On the Freegold view of fiat money, and how it's different from the “classic” view we all know:

Freegold really is an easy money system, if we're talking about the monetary system and not the wealth asset used for saving. Freegold money is just like today's money. And that's, I think, the big difference in A/FOA's view of the fiat monetary system.

Yes, there are many problems today, but they stem from the \$IMFS, not from modern fiat money. And by that, I mean they stem from savers all over the world saving in today's fiat money. That is truly the root cause of most of the problems people blame on easy money. We don't need to fix modern fiat easy central bank money, we just need to stop saving in it.

On how A/FOA's view on oil is it different from the “classic” view we all know:

So here's the other big difference between A/FOA's view and the “classic” view. The “classic” view is that if we ever see USD 30,000 gold, then oil would have to be at least USD 1,000 a barrel. But Another foresaw a post-revaluation gold/oil ratio of as high as 1,000:1, meaning, in real terms, not nominal terms, gold could be revalued to USD 30,000 an ounce with oil still at USD 30 a barrel!

This is possible, because A) the price of gold has no impact on the price of other things—it's basically an arbitrary price—whereas the price of oil is closely related to the general price level, i.e., inflation, and B) because the gold/oil ratio of the last 73 has never been allowed to find its physical equilibrium price. As I said, it all comes

down to “***the battle to keep gold from devaluing oil (in direct gold for oil terms)***.”

The “battle” has already ended. Europe stopped when the euro was launched, and the rest of the foreign public sector stopped supporting the \$IMFS five years ago. The gold/oil ratio which persists today is merely an artifact of the \$IMFS, the result of regression and the expectation of traders that tomorrow will be just like yesterday, just like the gold/silver ratio is an artifact of the same. It won't break until the \$IMFS ends. But when it does, the outcome A/FOA foretold is about 50 times greater than “the classic view we all know.”

On the future value of gold:

USD 55K is my number. I first used it in 2009. A/FOA used USD 30K, but that was back when gold was under USD 300 an ounce and oil was around USD 12 per barrel.

What is the thinking behind those numbers?

Well, first let me address A/FOA's number and where it came from. FOA was asked that question back in 1999, and he said it was a projection taken from a study done way back in 1988 in response to the stock market crash of 1987. It was based on the dollar losing “reserve use”. Here's what he wrote:

“This work started back in 1988, not long after the 87 crash. Important people were asking some very serious questions about the timeline of the world monetary system. They expected a long-term evolving report that would expand ongoing events into a format of true life context. A context to be understood at all levels of economic exposure. In other words, it had to do a better job of explaining the (then) recent illogical swings of world economic affairs and the effects of those swings on various national economic groups. Were we progressing into a new, better age, or was our system responding in a death-like downtrend?”

Because the questions grew from a fear that the world economy would indeed contract in the future, leaders wanted to know how one could retain the most wealth during such an event. It was thought that if the basic extended family blocks of a nation could survive such a collapse, savings intact, those nations and their children would be a benefit to economic affairs of the future. In effect, negate a possible return to the Dark Ages of European history. Our time frame was outward some 20+ years. I cannot offer the full report or its complete ongoing analysis. But, the effort you have seen to date is one of sharing somewhat for the common good of all.”

That gives us a good framework for understanding Another, as well as an idea of where the USD 30K number originated. We don't have all the details or calculations that went into it, but at least we know it was the result of a study.

On the potential for a dollar collapse:

What’s important today is not what’s priced in dollars or the dollars used for transactions, but the dollars held as reserves, savings and wealth. If you buy oil in dollars, what matters is if the seller then holds those dollars as reserves, savings or wealth. If he exchanges them for another currency he needs to pay his expenses or employees or whatever, then the transaction is basically irrelevant to the dollar.

The ball that I watch is capital inflow, that is, foreigners buying US assets. That’s all it takes to support the current system. When that stops, we will get dollar hyperinflation. Since 2013, the foreign public sector has been flat, which means foreign central banks stopped more than five years ago. It’s been the foreign private sector buying our bubbles since then.

That will stop when the markets crash, and an important part of my theory is that I don’t think the foreign central banks will pick up the slack this time like they have in the past. That idea is based on a number of things, from trends to statements to actions. And I view developments like the European uneasiness over Iran sanctions you mentioned as supportive of my theory.

In an interview with Ewald Nowotny, the governor of Austria’s central bank and a member of the ECB governing council, he talked about Europe’s efforts to counter the USG’s use of the dollar as a weapon. When the markets crash, and the foreign private sector stops buying US assets, the dollar will devalue. This devaluation will force the USG to print money hand over fist, but all that will do is cause the dollar collapse to accelerate.

The question is whether Europe and China will prop up the dollar at that critical juncture between when the stock market crashes and the dollar devaluation begins. In the past, they couldn’t let the dollar collapse without it taking them down with it. But today they are prepared, and because they are now taking active measures to counter the USG’s aggressive use of its exorbitant privilege, I don’t think they will be very quick on the draw trying to prop it back up. And that hesitation is important, because once the dollar collapse gets underway, there will be no putting that cat back in the bag.

On bubbles and the stock market:

In January of 2016, I wrote a post called *The Unicorn Economy* focused on the tech bubble, and ever since then I’ve been looking for bubbles. In January of 2017, I wrote about the “bubble of bubbles,” and in November of that year I had a section in a post titled, “Bubbles Built on Bubbles Built on Bubbles”. By that time, a few people were calling it the “everything bubble,” and in January of 2018, I called it the “Bubble of Bubble Bubbles,” dubbing 2018 the year of the POP.

I heard something on a recent interview I watched, I think it was Jeffrey Gundlach. He said, basically, that the first sign of a bubble market turning is usually some single crazy mania thing that happens. Like in the dot-com bubble, it was Pets.com, and in this one it was Bitcoin. It’s a sign that something has changed.

That whole run-up in Bitcoin from USD 2,000 to USD 20,000 during the second half of 2017 was pretty insane, and I had several posts during that time on related topics. That manic phase ended on 12/15/17, and a little over a month later, on 1/29/18, the stock market bubble popped. That was when it dropped 10% in 10 days. The turn in the market was confirmed with the October 3rd retest, and again on Christmas Eve with a 6% drop from the previous day's high.

As I write, we are testing the highs for a triple top, but I'm pretty convinced that the nine-year bull market turned into a bear last year, and this year I'm looking for a big drop, not just in stocks, but in the “everything bubble”, which includes virtually all US wealth assets except gold, things like real estate and art, too.

That's what I'm looking out for, because I think *that's* the next (final?) step on the trail to Freegold.

On floating exchange rates, the US trade deficit, and hyperinflation:

You see, the whole world is in a floating exchange rate regime today, ever since the Jamaica Accord in 1976. It's been a dirty float for most of that time, but since 2013 it's been pretty clean. That means the dollar is floating too. But its position in the float is the result of a constant inflow of capital, meaning a constant buying of dollars by foreigners which has been ongoing, non-stop, since 1975.

It's reflected in the US trade deficit. That's how you can see it. That's how you can know it's flowing in. A 44-year non-stop trade deficit doesn't just happen organically. It is *caused*. It is caused by a capital inflow. A capital inflow causes a trade deficit. And over 44 years of living with it day in and day out, the USG has grown addicted to it.

It's like the water in a fishbowl. The USG is a fish, and the perpetual trade deficit is the water. Only there are holes in the bottom of the fishbowl, so water is constantly leaking out. But there's also an equal inflow coming from a hose propped on top of the bowl. When the markets crash, that hose will be turned off, and the USG will find itself short on water.

When the markets pop and the inflow stops, the US dollar will drop, and the USG will find its current nominal budget insufficient for even its most basic operations. It won't be able to borrow or tax more, so it will print. At that point, the dollar will have only undergone a devaluation, a sudden drop to a lower level. But when the USG starts printing just to maintain the status quo it has grown addicted to, the dollar will start slipping again.

The slip will become a slide, and the more they print, the faster it will drop. That's how hyperinflation works. You can never print enough, because printing begets more printing, and you can never outrun the bear. So that's where I think we are in the dollar timeline today—right on the cusp of a big change. I can't say when it will happen, only that it's way overdue.

On how the “next financial system” will look:

It’s important to draw the distinction between savers and professional investors, traders and speculators. True professionals were in Wall Street long before all the easy money came in, and they’ll be there when it’s gone. But there are also a lot of savers today who think they are professional investors, traders and speculators, but wouldn’t be very good at it without the ocean of easy money.

Just like in online poker. While it was big, there were lots of mediocre players who thought they were really good, just because there were so many bad players playing. But that all ended on April 15, 2011, when they shut down online poker in the US. They call it Black Friday, and poker hasn’t been the same since. You can still play online outside of the US, but it’s not the same, because the easy, passive, dumb money is gone. The floodgates that opened in 2003 were closed on April 15, 2011. And that, in a metaphorical nutshell, is how the “next financial system” will differ from today.

The floodgates that let an ocean of passive savers’ money into the shark infested waters of Wall Street will close. Much savings will be lost, but new savings will go elsewhere. Investors, traders and speculators will still invest, trade and speculate, but it will be a smaller pool in which they play, and their skills, which have likely atrophied over the past 44 years, will once again be tested.

This is a big topic, and there are many implications worth exploring. It’s something I do at the Speakeasy once in a while, gaze into my crystal ball, and write about how I think the future will look. But the bottom line is that when this sucker blows, all those savers still invested in Wall Street are going to be so badly burned that they’ll never go back. At least not for several generations. And in my assessment, savings or savers’ money makes up the majority of the financial system today, so you can imagine how it’s going to have to shrink.

Passive investments such as ETFs will probably shrivel and all but disappear. Real estate investing will be boring and difficult like it used to be, so REITs will probably follow ETFs. Far fewer kids will study finance at college. You get the picture.

On the euro and the future role of gold:

Money will be just like it is today, mostly credit, denominated in a purely symbolic unit like the dollar or the euro. The dollar will have fallen far, and the euro will help bridge the gap. Most of the problems with the euro today, and criticisms of it, are actually effects of the current system, the dollar international monetary and financial system (\$IMFS), the fishbowl in which even the euro swims today. Once it is free from the \$IMFS, the euro will be money par excellence. The reason is mostly because of its management structure.

The reason I have positive things to say about the euro is because, no matter how it’s being used today, it was conceived and constructed to bridge the end of the

dollar reserve system to the next one. Its design, its architecture, will not only allow it to survive the transition, but also to flourish within the next system.

In his famous acceptance speech for the International Charlemagne Prize of Aachen for the euro in 2002, Wim Duisenberg said, “*It is the first currency that has not only severed its link to gold, but also its link to the nation-state.*” You see, the euro solved **two** problems. 1. It severed its link to the wealth reserve function of money. And 2. it severed its link to the Triffin Paradox of an international currency being managed by a single nation. These are the dollar’s two greatest problems, and the design of the euro resolved them.

FOA wrote:

“The dollar is ruled by one country and one country only. This implies that only one Economy is taken into consideration when policy is discussed, the USA. The management of interest rates, inflation, dollar value and crisis intervention, are therefore politically motivated to benefit one world group, again, Americans. We have seen the news events of how this tramples upon the needs of other geopolitical groups [countries].

On the other hand, the Euro will utilize a totally different structure of consensus management. It will be governed by many nations of obvious conflicting needs. This very weakness, that is so well documented by analysts, is the ‘major’ strength that will contribute to the popularity of the Euro.

So money will be just like it is today: easy. Easy money, not hard money. We don’t need hard money. Hard money is bad. It’s bad for the economy, and it’s bad for the debtors. Savers (and gold bugs) seem to want hard money, but after a while, those hard money systems end in either tears or bloodshed for the savers, as we abandon hard money once again. It happens over and over in history.

Freegold solves this problem, and ends the Groundhog Day repetition of easy and hard money systems forever. The role that gold will play is that of wealth reserve par excellence. That doesn’t mean that gold will be the very definition of wealth, but it will be the master proxy for wealth. And at a high enough price, there will be plenty of it to fulfill that role.

And on timing:

I think it will be a chain of uncontrollable events that will start with a stock market crash that could happen at any time. It could be something else, but whatever it is, I think the endpoint is still the same. And whatever it is, you can bet we’ll be talking about it at the Speakeasy!

End of the short version

***You can download the full interview for free from our website at
<https://ingoldwetrust.report/igwt/freegold/?lang=en>***

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The Enduring Relevance of Exter's Pyramid

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

John Exter

Key Takeaways

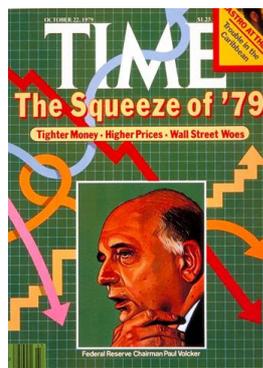
- The fact that John Exter's thinking is still relevant today was impressively demonstrated by the Great Financial Crisis of 2007/2008. As Exter's Pyramid suggests they would, investors lost confidence in risky financial derivatives during the financial crisis. Within the pyramid, liquidity flowed from top to bottom.
- Looking back, Exter was truly prophetic. More quickly than anyone, he recognized that – starting with the US – global monetary expansion was increasingly shifting from the traditional banking system to the shadow banking system.
- While every level of Exter's Pyramid includes debt – even cash is a liability, namely that of the respective central bank – gold is nobody's liability and therefore no debt. Hence, the precious metal is not part of the debt pyramid.



John Exter
Photo Credit: Barry Downs

John Exter was an American economist. Born in 1910, he graduated in economics from Harvard University. After staying at MIT during the Second World War, Exter joined the Board of Governors of the Federal Reserve System as an economist. In 1948 he served first as adviser to the Secretary of Finance of the Philippines and then to the Minister of Finance of Ceylon (now Sri Lanka). Between 1950 and 1953, Exter was the founder governor of the Central Bank of Ceylon, and in 1953 he became the division chief for the Middle East at the International Bank for Reconstruction and Development (IBRD). In 1954, the Federal Reserve Bank of New York appointed him vice president in charge of international banking and precious metals operations. He died in 2006 at the age of 95. Above all, John Exter is known for Exter's Pyramid.

Anyone who studies economics at university today will surely have learned one thing: It was Federal Reserve Chairman Paul Volcker who defeated inflation once and for all at the beginning of the 1980s by raising interest rates in 1981 to a peak of 21.5%. Since then, US interest rates have fallen and have hardly ever had to be raised again—precisely because, according to official statements, there has not been any real price inflation to combat since then.¹⁶⁸ **Paul Volcker went down in history as the *Inflation Fighter* – at least according to popular opinion.**¹⁶⁹



Source: Time Magazine

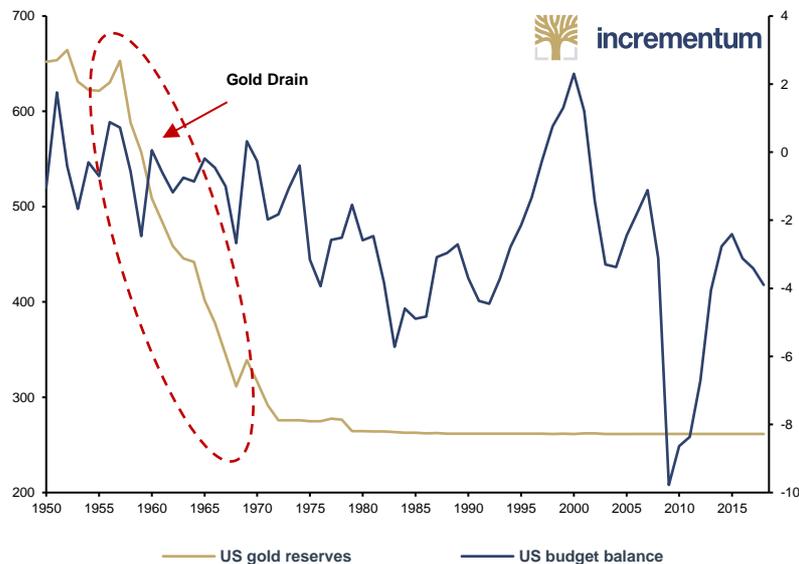
The fact that Volcker, who was appointed chairman of the Federal Reserve in 1979, had previously found the economic situation of those times a hard nut to crack is mentioned in the textbooks as well. Back then, the US economy was going through a phase of stagflation. Inflation was high, but economic growth was low. Not only was it difficult for many people to find a job, but their savings were also dwindling due to negative real interest rates. It comes as no surprise that politicians shifted the dissatisfaction and frustration of the general population onto Volcker and sought his dismissal.

The malaise had begun in the 1960s. That was when the US government started registering chronic budget deficits. The warnings that such a policy would lead to diminishing US gold reserves (“the gold drain”), a significant weakening of the US dollar, and rising price inflation were officially ignored.

¹⁶⁸ For a critique of the current inflation concept, see “[Inflation and Investment](#)”, *In Gold We Trust* report 2016

¹⁶⁹ Poole, William: “[President's Message: Volcker's Handling of the Great Inflation Taught Us Much](#)”, *Regional Economist*, Federal Reserve Bank of St. Louis, January 2005

US gold reserves, in million ounces, and US budget balance, in % of GDP, 1950-2018



Source: IMF, Federal Reserve St. Louis

I have directed Secretary Connally to suspend temporarily the convertibility of the dollar into gold or other reserve assets, except in amounts and conditions determined to be in the interest of monetary stability and in the best interests of the United States.

Richard Nixon

In 1971 President Nixon was forced to close the gold window due to continued demand for gold, especially from France. He did so by abolishing the convertibility of the US dollar into gold at the Federal Reserve. The associated loss of confidence in the US dollar and the wage and price controls adopted to attenuate it put pressure on the US economy. By the end of the decade, interest rates had reached 20%, with unemployment at 6%, money growth at over 13%, and price inflation at 15%.¹⁷⁰ However, Volcker was still committed to imposing a restrictive policy at the Federal Reserve in order to fully restore its credibility and therefore that of the US dollar.

John Exter meets Paul Volcker

“A currency can rise to global significance very quickly. The US dollar’s position may look secure for now, but there is no guarantee the US currency will retain its top slot in the longer term.”

Will Denyer

John Exter had criticized US fiscal policy in the 1960s and warned of its devastating consequences. With his graduate degree in economics from Harvard University, he became a member of the Federal Reserve Board of Governors and eventually became vice president of the Federal Reserve Bank of New York. Although his warnings seemed not to resonate with anyone in

¹⁷⁰ “Unemployment Rate by Year Since 1929 Compared to Inflation and GDP”, The Balance, updated May 10, 2019

Much of contemporary politics is based on the assumption that government has the power to create and make people accept any amount of additional money it wishes.

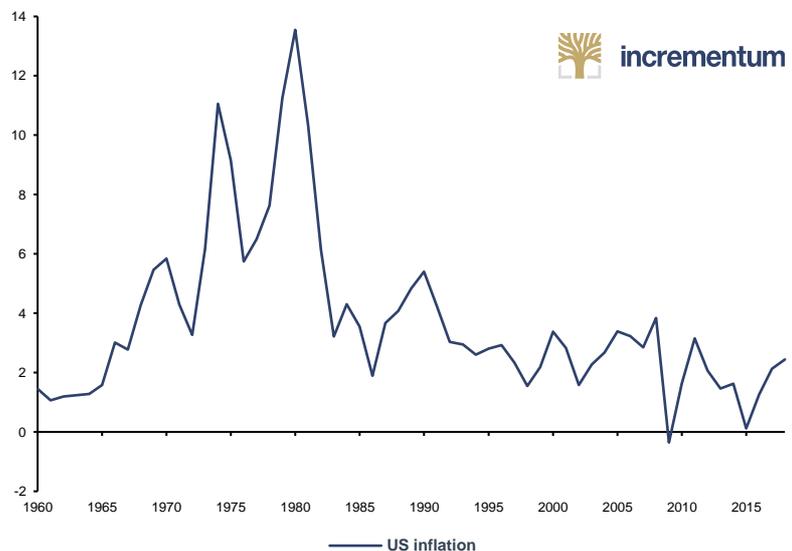
Friedrich August von Hayek

Washington DC, he was able to benefit from the depreciation of the US dollar and the associated rise in the price of gold as an active investor.

In April 1981, when US interest rates had reached almost 20%, Fed Chairman Paul Volcker decided to have an impromptu meeting with John Exter. Volcker knew that there was really only one way left for him to go: Open up the monetary floodgates to lower interest rates. Knowing that Exter had accurately predicted the macroeconomic developments of the last two decades, Volcker asked his advice about the precarious situation. The economist, who had long since retired, confirmed to Volcker that interest rates needed to be lowered in order to stabilize the economy. If Volcker did not take this step, the economy would completely collapse and he would lose his job as chairman of the Fed, said Exter.

Was it just a coincidence that Volcker and Exter had their conversation just as the Fed was beginning to consider cutting interest rates? After their spontaneous meeting, Volcker did not contact Exter further. The two knew each other from having worked together at the New York Fed. Back then they did not agree on the importance of gold – in fact they never agreed on the place of gold in the world's monetary system – and Volcker was as a matter of fact the impetus behind Nixon's decision to close the gold window to foreigners in August 1971.

US inflation (CPI), yoy, in %, 1960-2018



Source: Federal Reserve St. Louis, Incrementum AG

Inflation is as violent as a mugger, as frightening as an armed robber, and as deadly as a hit man.

Ronald Reagan

In any case, the Fed lowered interest rates only a few weeks after the meeting, and it was not long before money supply growth and price inflation slowed down. As we have noted in previous *In Gold We Trust* reports, money supply growth and price inflation are two different phenomena. Price inflation is always preceded by money supply growth, but not every instance of money supply growth necessarily leads to consumer price inflation. By the end of 1982, the inflation rate had dropped to about 3%. The economy and the stock market began to recover. Growth rates picked up again. Even unemployment

dropped, and inflation remained low. The US dollar also got stronger. Inflation, the hard nut, had finally been cracked.¹⁷¹

How could Exter possibly have known that Volcker's battle had been won and that it was time to reverse the course of policy and raise rates?

He did not of course have a crystal ball. He was, however, a very experienced and accomplished economist who therefore had a wealth of analytical experience to draw upon. That's what made him a realist. It is therefore not surprising that his analysis led him to similar conclusions as the representatives of the Austrian School had drawn. Indeed, Exter is said to have maintained a personal acquaintance with that school's most important exponent, Ludwig von Mises..

Deflation vs. inflation, or Exter vs. Mises

“Under the gold standard gold is money and money is gold. It is immaterial whether or not the laws assign legal tender quality only to gold coins minted by the government.”

Ludwig von Mises

The U.S. and world economies are on the threshold of a deflationary crash that will make the 1930s look like a boom. Gold will be the single best investment to own. Buy it now while it's still cheap.

John Exter

On one point, however, Exter's disagreement with the Austrian School is striking. **While many representatives of the Austrian School – albeit not all – have postulated time and again that a constant expansion of the money supply must ultimately end in (hyper)inflation, Exter considered a deflationary scenario to be more likely.** The more debt is created, the bigger the credit bubble becomes, and with it a potentially deflationary shock when this credit bubble bursts. Exter is said to have debated this issue with Ludwig von Mises in particular, especially since the latter saw *inflation* and not *deflation* hanging like a sword of Damocles over the global financial markets.

Inflationary Forces	Deflationary Forces
Zero interest rate policy	Balance sheet contractions of banks
Communication policy of the central banks (forward guidance)	Default / restructuring of debt
Quantitative easing	Quantitative tightening
Operation Twist	Faltering bank lending
Currency war	Productivity gains
Eligibility criteria for collateral	Currently low velocity of money
MMT, helicopter money	Regulation: Basel III
Shadow banking	Demographics

Source: [Austrian School for Investors](#)

¹⁷¹ Butler, John and Down, Barry: [A banker for all seasons: the life and times of John Exter – champion of sound money](#). July 2, 2013

The biggest market disasters happen when both leverage and securitization get mixed up with the same clever scheme.

Ben Hunt

The modern mind dislikes gold because it blurts out unpleasant truths.

Joseph Schumpeter

Looking back, Exter's assessment was quite prophetic. He seems to have recognized earlier than anyone else that, starting from the US, the global monetary expansion has increasingly shifted from the traditional banking system into the so-called shadow banking system. With the progressive issuance of government securities, mortgage-backed securities, and corporate bonds, these assets have gained the status of currency. Money has thus begun to take on a much broader meaning and at this point is actually everything that is securitized through financial markets, that is, everything that can be financialized and thus act as money.¹⁷²

When they speak of inflation today, the popular economic literature and financial journals address it almost exclusively in connection with consumer goods prices. Generally, there is talk of inflation as determined by the Consumer Price Index. While the actual inflation of many consumer goods is certainly mitigated by such methods as "hedonic pricing"¹⁷³, the incredible increase in the global money supply in recent decades has not in fact led to an explosion in consumer prices.¹⁷⁴

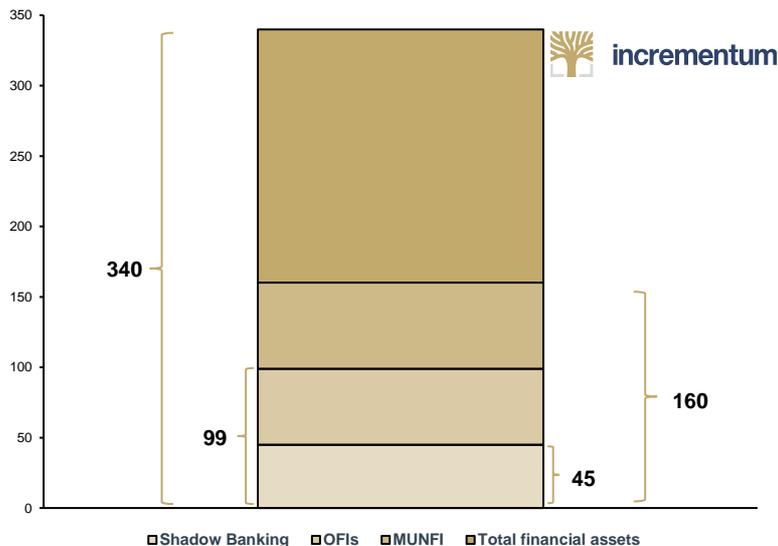
The global money supply has exploded since the gold standard was abolished, and has leaked into the shadow banking system mainly through the globally increasing debt-equity ratio of all economic actors. As financial markets have absorbed most of this liquidity and relatively little has penetrated into the real economy, so far there has been virtually no impact on consumer prices. Rather, deflationary tendencies have been identified in isolated goods in recent years, especially since many companies have been able to expand their production by raising capital on the financial markets. An example from the post-2008 era are the falling oil and gas prices fueled by capital-intensive fracking. The high level of fracking is a direct consequence of the low-interest-rate environment, and the activity has caused another build-up of corporate debt. Exter understood that this growing debt increasingly burdens the aggregate demand of the real economy, and that financial resources therefore move into the shadow banking system all the more.

¹⁷² McMillan, Jonathan: *The End of Banking: Money, Credit, and the Digital Revolution*. 2014

¹⁷³ Hülsmann, Jörg Guido: *Krise der Inflationkultur*, 2014: "This is the method of taking into account quality improvements in the case of products sold when calculating the price level. Even if the prices for a personal computer do not change from one year to the next, the 'most basic model' is usually better than the previous year's due to technological progress. It is therefore concluded that the device price has not remained stable, but rather decreased. By what exact amount has the price fallen? In contrast to the market prices actually paid, one cannot observe fictional 'hedonic' computer prices. Instead, the authorities' subjective discretion is now substituted for objective fact-finding. This allows artificially low price inflation rates to be arranged at will." [Our translation]

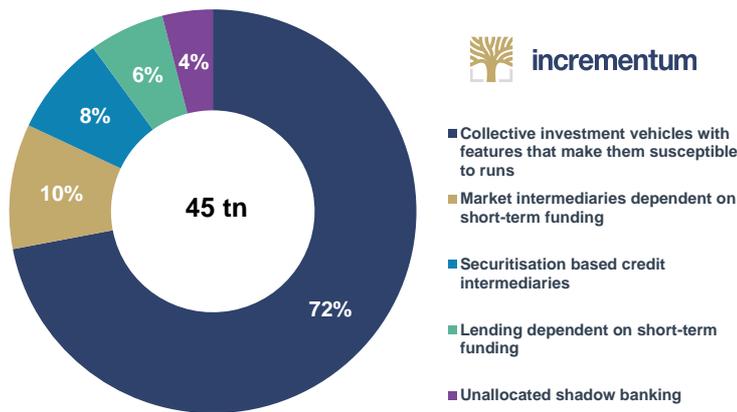
¹⁷⁴ See "[Inflation and Investment](#)", *In Gold We Trust* report 2016

Size of the global shadow banking system, in USD tn, at end 2016



Source: BIS, FSB, Incrementum AG

Composition of the global shadow banking system, in %, at end 2016



Source: BIS, FSB, Incrementum AG

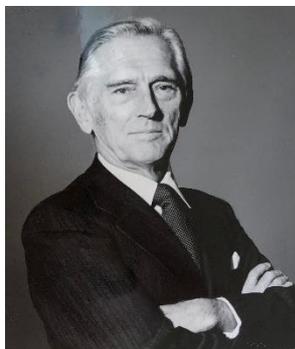
History suggests that big money supply expansions have first led to asset bubbles and then deflationary busts, before the eventual onset of an inflationary period.

Charles Gave

But Exter feared that the credit bubble would create an ever-expanding debt pyramid consisting of a wide variety of securitized assets, with the risk of sudden deflation rising with the burgeoning expansion of credit. When the debt pyramid could no longer be serviced, it would collapse in a deflationary downward spiral, Exter argued.

With the banking and financial crisis of 2008, the threat of such a scenario became real, confirming Exter's fears. Liquidity dried up in the interbank market, putting banks under immense pressure. In order to prevent a deflationary shock, the financial authorities massively intervened. This was the only way to avert eventual hyperinflation on a broad front. **It could be said that in 2008 the financial**

system just barely avoided an “Exter moment”, a deflationary death spiral akin to the so-called “Minsky moment”.



John Exter
Photo Credit: Barry Downs

Who is right?

“Success breeds a disregard of the possibility of failure.”

Hyman P. Minsky

So have Mises, Hayek, and other Austrians been completely mistaken with their warnings about hyperinflation? A look at the consumer goods prices of past decades seems to suggest such a conclusion. Because of this, some contemporary economists consider the thoughts and approaches of the Austrians completely discredited.

If you take a closer look, however, you realize that global monetary expansion over the past few decades has clearly resulted in huge price distortions, but not where prices are officially measured. Inflation – meaning that of credit – has taken place almost exclusively within the shadow banking system. Therefore, it is not the prices of food, energy, or consumer durables that are inflated, but the prices of a variety of financial instruments in the form of debt securities that have become money due to the financialization of loans.¹⁷⁵

The sell decisions in a liquidity crisis are seldom made by the investor. They're made by the margin clerk. And in a context like that, everything gets sold, whether it has a bid or it doesn't have a bid.

Rick Rule

This house of cards consisting of debt securities, created by the inflation of credit, has now reached massive size. The potential drop is so high that a self-reinforcing deflation spiral would be the necessary consequence of a collapse. The fall-curve can be easily predicted by Exter's Pyramid. Liquidity in the financial system is gradually falling as a result of waning risk appetite. At the broad top of the pyramid are speculative investments such as financial derivatives, from which liquidity is increasingly being drained as a result of a loss of confidence, which puts them under price pressure. Credit is generally known to be dormant mistrust, which is why creditors are trying to sell increasingly illiquid asset classes and are moving into the underlying asset classes due to growing risk aversion. Investors are thus funneled toward the government bonds and cash holdings at the bottom of the pyramid.¹⁷⁶

Although inflation and deflation are opposites, paradoxically, both phenomena can be diagnosed in our financial system today. Playing off one against the other provides little insight. Rather, combining both approaches, that of Mises and that of Exter, better reflects the confused state of our current financial system.¹⁷⁷

¹⁷⁵ See Hayek, Friedrich A. von: [Denationalisation of Money](#). 1990 [1974]

¹⁷⁶ See “Exter's Pyramid”, *In Gold We Trust* report 2012

¹⁷⁷ See “Gold and Inflation”, *In Gold We Trust* report 2014

Misconceptions about Exter's Pyramid

"I said I need a dollar dollar, a dollar is what I need. Hey hey. And if I share with you my story, would you share your dollar with me. Bad times are comin' and I reap what I don't sow. Hey hey."

Aloe Blacc, "I Need A Dollar"

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 Oliver

The relevance of Exter's thinking was impressively demonstrated by the Great Financial Crisis of 2007/2008. As Exter's Pyramid suggests they would, investors lost confidence in very risky financial derivatives during the crisis. There were shifts, and liquidity flowed from the bloated top to the secure bottom of the pyramid. Stocks and debt securities issued by companies or emerging economies were also sold and, paradoxically, flowed into the US – the place of origin and the epicenter of the crisis. US investors withdrew their capital from abroad, while foreign investors pumped their money into the US financial market in search of a safe haven. From September to December 2008, US securities markets had net capital inflows of USD 500bn, and the money came almost entirely from private investors.

How can this be explained? As the numbers reveal, the funds did not flow into just any securities but almost exclusively into US Treasury bonds – as expected by the theory underlying Exter's Pyramid.¹⁷⁸ Since the US dollar and all other paper currencies were decoupled from gold in 1971, there have been isolated economic and financial crises again and again. Although gold also profited from each loss of confidence, US Treasuries have always proven to be the ultimate security asset – to the astonishment and annoyance of many gold bugs and crisis prophets. Paradoxically, investors from all over the world have so far resorted to the chronically indebted USA as a safe haven during every crisis of confidence.

All currencies are IOU nothings.

John Exter

Was Exter wrong in his assessment that gold is the tip of the inverted debt pyramid? No, because gold is actually located at the very bottom. **However, here is what is often overlooked: Although gold lies at the bottom tip of the pyramid, it is not part of it.**

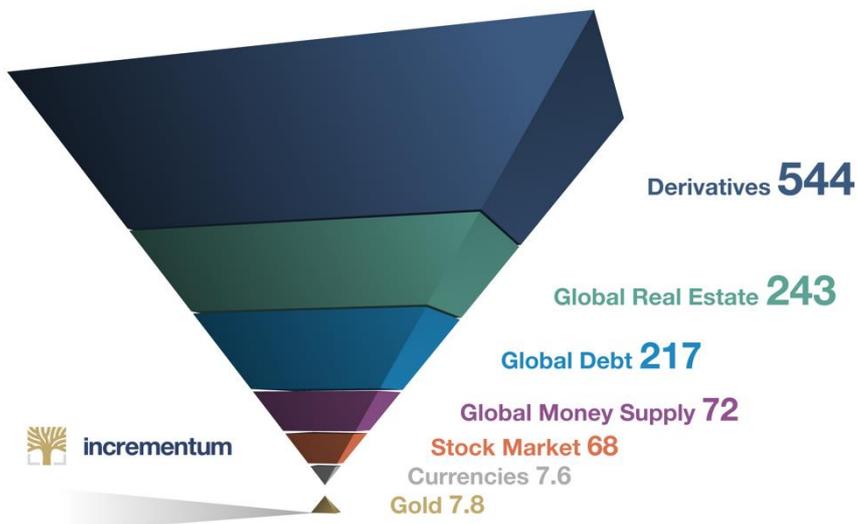
Gold is money. Everything else is credit.

John Pierpont Morgan

What is that supposed to mean? **While all levels of Exter's Pyramid include debt – even cash is a liability, namely that of the respective central bank – gold is nobody's liability. Therefore, gold does not face a promise of debt and is the only real alternative to fiat currencies.**

¹⁷⁸ Prasad, Eswar: The Dollar Trap: How the U.S. Dollar Tightened Its Grip on Global Finance. 2014

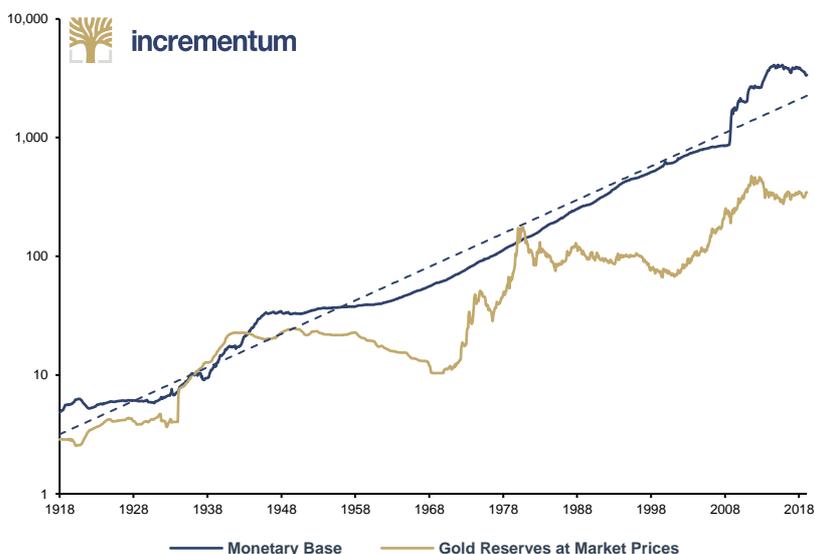
Exter's Pyramid, in USD trn, 2018



Source: BIS, Bloomberg, IIF, World Bank, World Gold Council, Visual Capitalist, Incrementum AG

If previous crises of confidence in the economy and the financial world did not trigger a flight into gold, but rather into US Treasury bonds, this is a sign that the inverse debt pyramid has not yet been completely questioned. US Treasury bonds have been able to calm investors' fears and restore confidence in the pyramid and its various levels of debt instruments. But should that no longer be the case, because Treasury bonds themselves are deemed untrustworthy, the debt pyramid would collapse. Then gold would actually be the last safe haven. John Exter was sure that this day would come. He firmly believed that paper money could only work if it was fully redeemable at all times. If it is not, the collapse becomes inevitable.

Monetary base and gold reserves at market prices (log), in USD bn, 1918-2018



Source: Federal Reserve St. Louis, World Gold Council, Incrementum AG

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

Russell Napier



Barry Downs
Photo Credit: Barry Downs

Given the monetary madness of today, the teachings of John Exter are more relevant than ever. The extremely fragile financial markets are vulnerable to a deflationary spiral that would tear down the bloated, top-heavy debt pyramid. We have created the illusion of wealth that is described by this unwieldy pyramid. How are we going to look if countless financial assets that are believed to be liquid lose their monetary status someday, and if there are no bid prices, i.e. no demand, anymore as a crisis sets in? Then the house of cards collapses, as Exter foresaw.

Gold, the Anchor of the World – an Interview with Barry Downs, John Exter's son-in-law

Barry Downs is John Exter's son-in-law. Early on Barry was thrilled with his father-in-law's work, and he accompanied him to many discussions with business and financial experts. He is convinced that his father-in-law's thoughts are more relevant today than ever before. We had the honor of conducting an exclusive interview with Mr. Barry Downs.

When did John Exter come up with the idea of presenting the numerous assets of our financial system in the form of an inverse pyramid?

He had already designed the inverse debt pyramid in the late 1950s and went public with it in the early 1960s. However, it did not really become well-known until 1972, when he retired and became an independent consultant on national and international monetary issues.

What exactly does Exter's inverse debt pyramid describe, and how should it be understood? What role does gold play in it?

Exter's debt pyramid contains the liabilities of all asset classes of our financial system. The riskiest debt securities – the numerous financial derivatives – are at the top of the pyramid. Any asset class lower on the pyramid is also a liability, but the risk decreases at each level until it reaches the lowest level, which consists of cash reserves and US Treasuries. If people were to lose confidence even in Federal Reserve banknotes and US Treasuries, the last haven would be gold, outside the debt pyramid.

Gold is outside the pyramid? Normally, gold is depicted as an inverted triangle at the bottom of the pyramid, but is still considered part of the pyramid itself.

That's wrong. All the categories within the pyramid are debt, while gold is nobody's obligation and therefore no debt. Therefore, gold cannot occupy a position within the pyramid. John Exter concluded that all debts become uncertain at some point in time, which is why people's investment decisions will move down along the inverse pyramid to reduce the risk until they are holding government bonds and cash. If they lose confidence in these funds, then they will have to leave the debt pyramid and turn to the world's only true money, gold.

Trust me.

**Arnold Schwarzenegger
in Terminator 3**

Why is the concept of Exter's Pyramid still relevant today?

Because we are at a critical point today. In 2008, the financial world would have plunged into a deflationary death spiral if central banks had not intervened. But they have only postponed the inevitable. For Exter it was clear that a fiat money system is a system of dishonest money and that it inevitably ends in tragedy.

John Exter was American. According to his economic thinking, however, he could certainly be counted among the Austrian School.

John Exter was an independent thinker and basically had his own understanding of economics. But he was quite close to the thinking of the Austrian School economists, shared many of their views, and was highly regarded by the Austrians. However, I never heard that he introduced himself as Austrian. But it is certainly not wrong to call him an Austrian-thinking economist. He was also a good friend of Mises, Hayek, and Rothbard and a very good friend of Jacques Rueff.

Austrian School economists have repeatedly warned against inflation and hyperinflation due to monetary policy interventions by central banks. In contrast, John Exter saw more of a danger in a big deflation.

Yes, John Exter was convinced that the monetary madness of the central banks would end in a deflationary depression that could continue for several generations. He was in dispute with most Austrian School economists in this matter. He pointed to the numerous defaults by companies and households that would lead to deflation and emphasized that gold would never fail. In gold, he saw both deflation and inflation protection.

How would John Exter assess the debate around inflation and deflation today?

If John Exter was still alive (he died on February 28, 2006), he would have witnessed the 2008 debt crisis and the worldwide near-slip into deflation. I am sure he would have seen this as a harbinger of a future deflationary endgame. At this point, he would probably consider a hyperinflationary development of the US dollar as unlikely.

John Exter is said to have discussed the inflation and deflation problem extensively with Ludwig von Mises. What can be said about the relationship between the two?

Exter and von Mises were close friends and spent a lot of time together. Von Mises died in 1973 and from then on Exter cultivated a friendship with von Mises' widow, Margit. Personally, I remember a dinner with Margit at Exter's home. Not infrequently, inflation and deflation became the talk of the table. To my knowledge, Mises never agreed with Exter's view that a deflationary collapse is more likely.

Was John Exter also critical of the nature of our paper money?

Exter was strictly against our paper money system! He firmly believed that paper money could only work and be morally justifiable if it was fully redeemable in gold.

Interestingly, John Exter was highly regarded as a successful central banker. How have other central bankers received his views?

John Exter knew central bankers around the world, and they knew him. Many of them respected and did not contradict him, especially when talking about gold. However, many had a government at their back, to which they were accountable. And these governments were – and still are today – influenced by and oriented towards Keynesianism. In 1981, for example, I accompanied Exter on a visit to Paul Volcker and heard Exter reproach him for being the driving force behind the closure of the gold window in 1971.

They say John Exter was a big, active investor. What do you know about his style of investing?

There can be no other criterion, no other standard than gold. Yes, gold which never changes, which can be shaped into ingots, bars, coins, which has no nationality, and which is eternally and universally accepted as the unalterable fiduciary value par excellence.

Charles de Gaulle

It may well be that at some point in his life Exter owned some common stocks. But his true devotion and competence was gold. He mainly owned South African gold mining shares in the form of depository receipts for non-American stocks. He had owned shares of Homestake Mining in the early Depression years of the 1930s and was doing very well. Those mining stocks dropped large dividends as the mines pursued a policy of paying out almost everything they earned. John also advised the South Africa Chamber of Mines and co-founded ASA Ltd. together with Charles Engelhard. Of course, he made his money in US dollars, but he invested quite a bit in gold coins at the price of 35 dollars per ounce. His wife did her part and collected high-quality gold jewelry.

What's the biggest lesson we can still learn from John Exter today?



John Exter with his wife, his daughter and his son-in-law, Barry Downs

John Exter was arguably the only honest central banker history has seen. Therefore, for him there was no doubt: The only honest paper money is one backed by gold and fully redeemable in gold. For him, gold was the anchor of the world, which not only protects you from financial turmoil but also protects you in times of disaster.

Thank you very much, Mr. Downs!

Portfolio Characteristics: Gold as Equity Diversifier in Recessions

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

Oliver Wendell Holmes

Key Takeaways

- Our historical analysis shows that both gold and US Treasury bonds have been able to absorb a significant share of stock drawdowns in a portfolio context. Retrospectively, both asset classes are suitable as effective stock diversifiers.
- Whether (in particular, US Treasury) bonds can take on that role in the future is in question. Global debt, the zombification of the economy, and the still low yield level cast more than just a shadow of doubt on bonds in this respect. In an environment of this sort, gold presents better future opportunities than bonds.
- A detailed analysis of gold in recessions shows that the precious metal has achieved a clearly positive average performance across all recession phases scrutinized, thus effectively offsetting stock price losses.

Introduction

“By failing to prepare, you are preparing to fail.”

Benjamin Franklin

Friends of our annual *In Gold We Trust* report know that we regard gold as an indispensable portfolio component due to its unique characteristics. The analysis of gold in a portfolio context has therefore always been a crucial part of the *In Gold We Trust* report.¹⁷⁹

A surprisingly large percentage of US income tax receipts are tied to a rise in US stock prices. When the US stock market just stops rising...not falls, but just stops rising, that will put pressure on the receipt side of the US fiscal picture, which no one is talking about.

Alan Greenspan

The global experiments in monetary policy that we have seen in the recent decade have significantly contributed to containing the volatility of the stock markets over that period. In last year’s *In Gold We Trust* report we pointed out that the tide was turning as far as monetary policy was concerned. Shortly thereafter, stock investors were reminded that volatility could in fact experience sudden and unexpected surges. Emerging growth worries as well as worries over the sustainability of the fiscal situation have re-entered the discourse among market participants. Former Federal Reserve chair Janet Yellen has even taken back her infamous statement that she did not expect a new financial crisis in her lifetime and now sees “gigantic holes in the system”.^{180,181} Times have changed in the tenth year of economic boom, and we are not surprised. While no new proper financial crisis may be looming on the horizon yet, economic expectations have continuously deteriorated in recent months.¹⁸² It became obvious by the fall of 2018 that stock markets had started issuing clear warning signals, and financial market participants have certainly paid attention. **What to do if the long-standing bull market in stocks is now finally coming to an end?**

Those who are easily shocked should be shocked more often.

Mae West

In this year’s edition of the *In Gold We Trust* report we therefore want to take a closer look at suitable stock diversifiers. To this end, firstly we will analyze whether the traditional stock diversifier, bonds, remains a sensible and suitable instrument. Along similar lines, we will also scrutinize gold and its diversification characteristics. Secondly, we will drill down deeper and analyze the individual phases of recessions. More specifically, we will interrogate how gold and stocks develop during various bust phases of the economic cycle.

¹⁷⁹ The focal points of previous editions have been on the investigation into the antifragility of gold, the opportunity costs of gold, and the permanent portfolio (*In Gold We Trust* report 2016); and in our *In Gold We Trust* report 2017 we had a closer look at the relationships among gold and the US dollar, interest rates, and stocks. In addition, we compared the purchasing power of different goods in gold over long periods of time. The addition of gold to equity and bond portfolios, the role of gold for central banks, and the proposal of a gold price-oriented monetary policy were parts of the *In Gold We Trust* report 2018.

¹⁸⁰ See “Fed’s Yellen expects no new financial crisis in ‘our lifetimes’”, Reuters, June 27, 2017

¹⁸¹ See “Yellen sieht Gefahr neuer Finanzkrise” (“Yellen sees risk of new financial crisis”), *Frankfurter Allgemeine Zeitung*, December 12, 2018

¹⁸² For example, the EU Commission has recently cut its growth forecast for the Eurozone for 2019 from 1.9% to 1.3%, see European Commission: [European Economic Forecast, Winter 2019](#), February 7, 2019. Global economic growth, too, continues to weaken. The World Bank expects only 2.9% now (previously 3.0%), see “[Darkening Prospects: Global Economy to Slow to 2.9 percent in 2019 as Trade, Investment Weaken](#)”, The World Bank, January 8, 2019; “[European Economic Forecast – Winter 2019](#)”, EU Commission, February 2019

Hedge against falling stock prices: gold vs. bonds

“True ignorance is not the absence of knowledge, but the refusal to acquire it.”

Karl Popper

Having gone from strength to strength for years, the bull market in equities took a hit in the second half of 2018. Many stock indices have lost significantly since their highs.

Highs and lows of important stock indices and gold performance

Date		Performance since stock market index all-time high
04/2019	S&P 500	-3.2%
	Gold	1.0%
10/2017	DAX	-7.1%
	Gold (EUR)	5.5%
01/2018	Hang Seng	-14.0%
	Gold (CNY)	4.8%
07/2018	FTSE	-4.7%
	Gold (GBP)	8.1%

Source: investing.com, Incrementum AG

Possession does not make us half as happy as loss makes us unhappy.

Jean Paul

Stocks tend to make up a large portion of the portfolio, which seems like a sensible move in the long run.¹⁸³ Historical data suggests that the well-known 60/40 portfolio (60% stocks, 40% bonds) offers a decent risk-return profile. Since 1929, a 60%/40% split invested in the S&P 500 and 10Y US Treasury bonds, respectively, would have earned the investor an average annual yield of +9.00% (inflation-adjusted: +5.90%).¹⁸⁴

That is not surprising, given that bonds are considered a classic diversifier and a hedge against falling stock prices. Stocks can benefit from optimistic economic expectations during boom phases, whereas bond prices tend to feel the headwind from rising key lending rates during periods of economic expansion. The opposite is true for the phases before and during recessions. During a recessionary phase, stocks tend to have a generally hard time. They will usually incur significant losses. Investors can use bonds in times of negative economic growth as a “natural” hedge.

Historical analysis

On the basis of this theoretical approach, we want to take a closer look at the historical development of bonds (as measured by the futures of 10Y US Treasury bonds) and gold in relation to stocks (as measured by the S&P 500). The following

¹⁸³ Alternative investments (such as real estate, commodities, or hedge funds) tend to play a subordinate role and are often add-on positions in the portfolio (so-called satellites) that are meant to improve yield.

¹⁸⁴ See [“The 60/40 stock-bond weight rule needs to go on a crash diet”](#), Yahoo! Finance, April 11, 2018

chart shows the performance of 10Y US Treasury note futures and of the S&P 500 Index.

Performance of S&P 500 (left scale), and US 10Y Treasury notes, in % (right scale), 01/2000-04/2019



Source: Federal Reserve St. Louis, investing.com, Incrementum AG

Most people invest and then sit around worrying what the next blow-up will be. I do the opposite. I wait for the blow-up, then invest.

Richard Rainwater

The chart seems to confirm the original hypothesis. Whereas stock markets incur significant losses just before and during a recession, bond prices post substantial gains during and after recessions. This was especially true for the recession of 2001 and the Great Financial Crisis of 2008/2009. It is also striking to note that bond prices are clearly dependent on the interest rate policy of the Federal Reserve. The correlation coefficient between the US 10Y Treasury and the effective federal funds rate is -0.10. The weak correlation suggests that they are generally opposed to each other. In a nutshell: When key lending rates are falling, bonds are up, and vice versa. This explains the rise in bond prices in the wake of the Great Financial Crisis, when the Federal Reserve through QE created artificial additional demand for Treasury bonds. Increasing bond prices have therefore had the potential in the recent past to post gains amid bear stock markets.

As for gold, we can see that it suffered from a significant decline in prices prior to the 2001 recession while stock prices were booming (see the following chart).

Performance of S&P 500 Index (left scale), and gold price, in USD (right scale), 01/2000-04/2019



Source: Federal Reserve St. Louis, investing.com, Incrementum AG

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

Rudy Havenstein
Funniest Tweeter of the Millennium

Systemic crises seemed unthinkable at the time, given the global hegemony of the USA. Rather, new-technology corporations in a booming economy and a globalizing capitalist economic system promised excellent growth opportunities. This environment could not have been worse for gold. However, the situation before, during, and after the sharp contraction of 2009 was completely different. From January 2003 to January 2013 the gold price soared by 368% (in US dollars), which is tantamount to an annual performance of +16.7%. Then, as the global macroeconomic situation headed for calmer waters, especially in the Eurozone (N.B. we remember Mario Draghi’s “Whatever it takes” speech of July 26, 2012), gold took a hit in US dollars as well.

In summary, gold in particular seems to benefit from extreme market events. This explains for example why gold at first lost significantly before the 2001 recession. That recession marked the trend reversal. The euphoria of the turn of the millennium had passed and the economic power of the USA had stopped looking impenetrable. As a result, the gold price gained substantially until the next extreme market events (the recession of 2009 and the euro crisis of 2010-2013).

In this sense, bonds and gold appear to be complementary stock diversifiers. The following chart shows the 3Y rolling correlation between US 10Y Treasury bonds and the S&P 500, as well as between the gold price and the S&P 500.

Rolling correlations of gold and 10Y US Treasury with the S&P 500, 01/1985-04/2019



Source: Federal Reserve St. Louis, investing.com, Incrementum AG

The risk of not owning gold is greater than the risk of owning gold.

Brent Johnson

Gold is largely not a commodity but trades as a complex macro asset that internalizes various currency, interest rate and risk appetite metrics.

Scotiabank

This assumption is supported by the 3Y rolling correlation, especially for the 1980s and 1990s. US 10Y Treasury bond prices were positively correlated to the S&P 500 over these two decades, while gold was slightly negatively correlated. Interestingly, though, the 3Y rolling correlation of the US 10Y Treasury bond switched signs around the year 2000 and has been negative with respect to the S&P 500 ever since. The 3Y rolling correlation since 2000 between the US 10Y Treasury bond and the S&P 500 is -0.28. This is significantly more negative than for gold, which recorded a correlation of -0.15 over the same period.

Gold maintained a weak negative correlation throughout the entire period of -0.11 relative to the S&P 500. **This prompts the conclusion that gold was a relatively good stock diversifier throughout, a hypothesis that has recently been substantiated in an empirical study by the researchers Zhen He, Fergal O’Connor, and Jacco Thijssen.**¹⁸⁵ Applying the CAPM,¹⁸⁶ they investigated the relationship between gold and the stock markets of the UK and USA, and came to the following conclusion:

“(…) we think that a review of the results from earlier papers on this issue, coupled with our findings, points to the fact that gold is always a hedge or, at worst, always an excellent diversifier of portfolio risk. Gold’s usefulness in managing risk does not disappear in a crisis when the prices of the vast majority of assets tend to be perfectly correlated.”¹⁸⁷

¹⁸⁵ He, Zhen et al.: “Is gold Sometimes a Safe Haven or Always a Hedge for Equity Investors? A Markov-Switching CAPM Approach for US and UK Stock Indices”, *International Review of Financial Analysis*, Vol. 60, October 2018

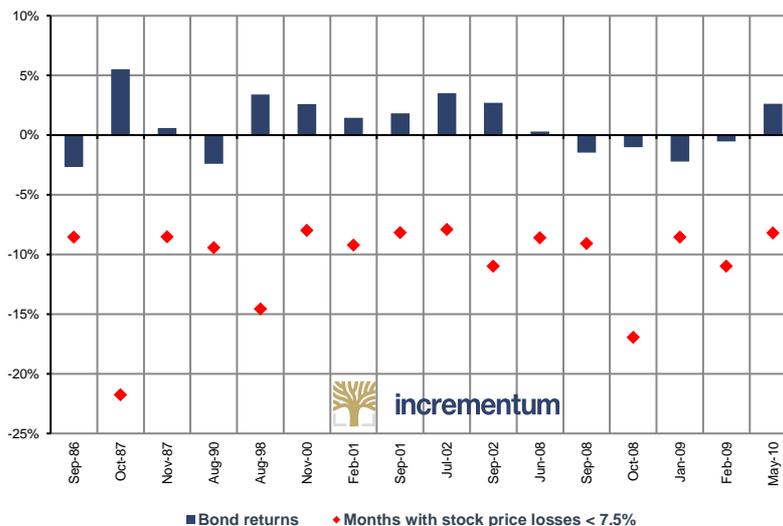
¹⁸⁶ CAPM = Capital Asset Pricing Model, the most widely used asset valuation model.

¹⁸⁷ He, Zhen et al.: “Is Gold Sometimes a Safe Haven or Always a Hedge for Equity Investors? A Markov-Switching CAPM Approach for US and UK Stock Indices”, *International Review of Financial Analysis*, Vol. 60, October 2018, here: pp. 9-10

In contrast to other studies,¹⁸⁸ the authors point out that gold is in general a very good diversifier across the markets they scrutinized – and not only in times of crises.

As a next step, we shall examine how the gold price and the bond yield react to strong stock price losses. The following chart illustrates the reaction of bond performance¹⁸⁹ to a monthly loss of more than 7.5% by the S&P 500.

Reaction of bond performance to stock price losses > 7.5%, in %, 1986-2018



Source: Federal Reserve St. Louis, investing.com, Incrementum AG

Every great crisis reveals the excessive speculations of many (banking) houses which no one before suspected.

Walter Bagehot

Gold's job is to be a reliable store of value, and sometimes zero is the best deal in town.

Charlie Morris

In the observation period, the performance of bonds and the losses incurred by the S&P 500 occasionally formed a wide gap. This was true, for example, for October 1987, August 1998, and July 2002. However, there were also months where bond performance was negative (e.g. September 1986, August 1990, and January 2009). **Overall, the picture emerges that bond performance (i.e. bond price performance + interest) reacted positively to stock price losses of more than 7.5% in the majority of cases (62.5%), which confirms the historical suitability of bonds as a stock diversifier.** A long-term study by BlackRock, which analyzed the annual performance of bonds in bear stock markets, arrives at an even clearer conclusion.¹⁹⁰ The study illustrates that negative annual bond performance has occurred particularly often around Black Swan events. This was the case, for example, in 1931 (with the collapse of Creditanstalt in Austria) and in 1941 (with the USA's entering WWII).

This classic point of view has been tried and tested many times in the past and has kept many an investor from doom. It is now therefore interesting to see how gold behaves in equity bear markets. Is it also suited as a hedge against falling stock prices? If so, was it historically better suited

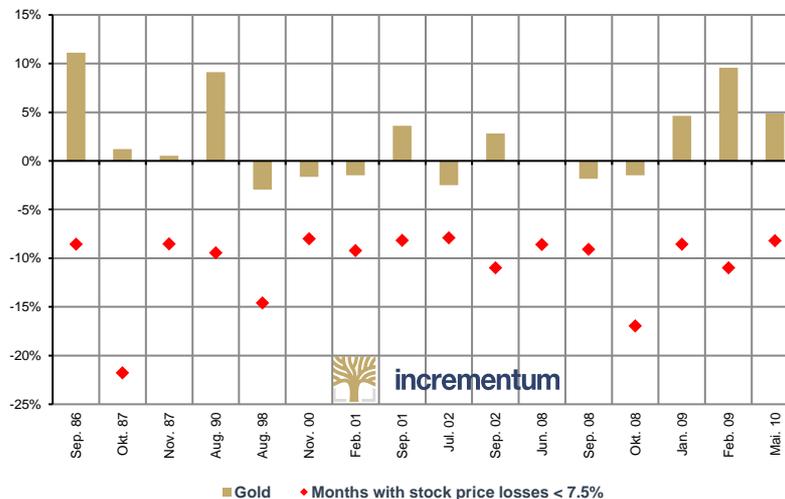
¹⁸⁸ For a good overview, see O'Connor, Fergal A. et al.: "The financial economics of gold – A survey", *International Review of Financial Analysis*, Vol. 41, October 2015, pp. 186-205.

¹⁸⁹ Total bond performance is a composite of bond price performance and monthly accrued interest.

¹⁹⁰ See Rosenberg, Jeffrey: "Are bonds still a good hedge to stocks?", BlackRock Blog, May 17, 2018

than bonds? In analogy to the above, the following chart illustrates the reaction of the gold price in US dollars to a monthly loss of more than 7.5% of the S&P 500.

Reaction of gold price to stock price losses > 7.5%, in %, 1986-2018

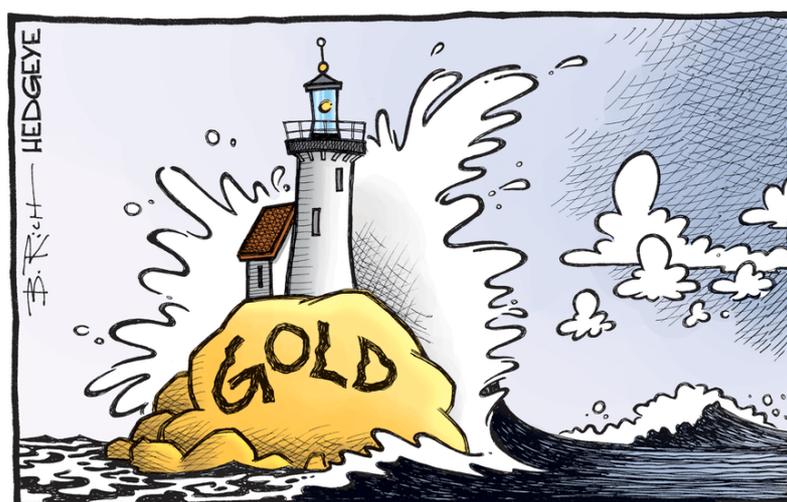


Source: Federal Reserve St. Louis, investing.com, Incrementum AG

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

Jim Rickards

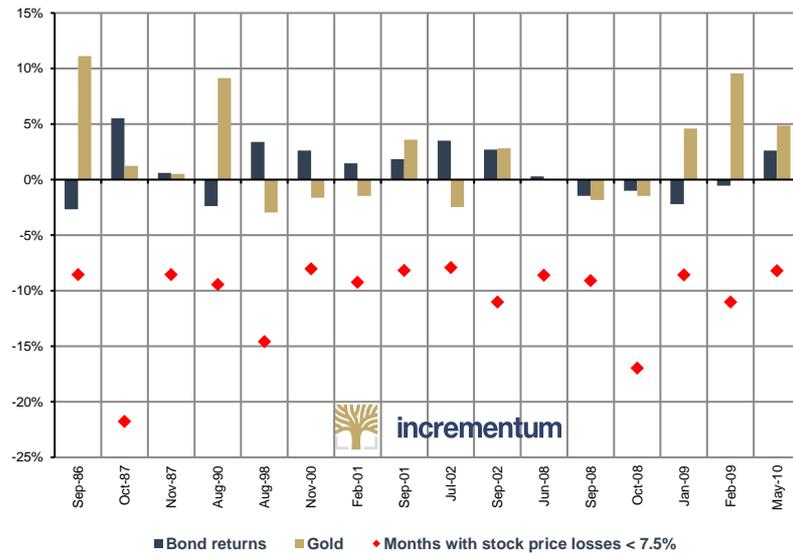
We can see that gold is on an equal footing with US Treasury bonds when it comes to its suitability as a diversifier against bear markets in equities. Here, too, the reaction is not the same across the board; instead, we can identify periods of rising and falling gold prices. Prices rose substantially in September 1986, August 1990, and February 2009. In August 1998, July 2002, and September 2008, on the other hand, gold investors incurred losses.



Courtesy of Hedgeye

In total, the gold performance was positive in 62.5% of cases, with the average monthly performance of +2.13% in clear excess of the 10Y US Treasury bond (+0.86%). Much like the 10Y US Treasury bond, gold has shown to be a suitable stock diversifier in the past. The following chart sums up the two earlier ones.

Reaction of bonds & gold to stock price losses > 7.5%, in %, 1986-2018



Source: Federal Reserve St. Louis, investing.com, Incrementum AG

The chart above prompts a number of conclusions:

- **Throughout the entire observation period, gold or bond performance during months with clearly negative stock performance was never worse than stock performance.**
- **Gold and US Treasury bonds proved to be valuable portfolio complements, in particular during bear markets in stocks.** As we have already pointed out, there were months where both gold and bonds performed negatively. However, that performance was often offset by other asset classes: When bonds went down (e.g. September 1986, August 1990), gold was clearly up – and vice versa (e.g. August 1998, July 2002).
- **There have been only two months since 1984 (September and October 2008) when both bonds and gold yielded a negative performance.** This means that in 87.5% of observed cases, the gold price and/or bond price gains would have absorbed stock price losses.

Wherever there is danger, there is also salvation.

Friedrich Hölderlin

Historical analysis shows that gold and 10Y US Treasury bonds have done a good job as stock diversifiers in the past. In particular, both assets have mostly posted gains during bear stock markets and complement each other very well.

We are made wise not by the recollection of our past but by the responsibility for our future.

George Bernard Shaw

Our monetary system is governed by a bunch of former tenured economics professors who can't open a can of tuna fish without assistance and are guided by econometric models that don't describe how the real world works.

Michael Lewitt

Qualitative forecast

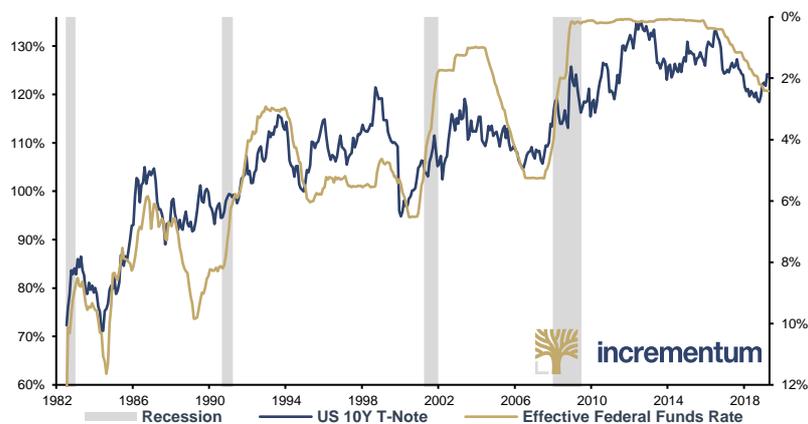
In a historical context, gold therefore seems to be as good a hedge against falling stock prices as bonds. **The crucial question at this point is whether bonds or gold will remain good diversifiers against stock price losses in the future, too?**

Since bond prices are decisively affected by market interest rates, we must first point out the following. In today's credit-based monetary system, market interest rates are no longer a phenomenon that is (purely) determined by the market. They are not the result of the free interplay of supply and demand but are strongly influenced by the monetary policy set by central banks. The central banks are the pivotal market agents in this context. In pursuit of their macroeconomic goals,¹⁹¹ they influence market interest rates directly and indirectly through their monetary policy. Conventional measures (interest rate policy) have an indirect effect, while unconventional measures (e.g. QE) come with a direct effect on market interest rates and bond prices.

Conventional monetary policy

The go-to tool of conventional monetary policy is the adjustment of the key interest rates. By changing these rates, the central banks directly influence the short-term interest rates of the money market in the narrow sense of the flows of money between central banks and commercial banks. Interest rate adjustments by the central banks ensure their impact on the money market in the wider sense through commercial banks, via short-term securities being traded. By this transmission mechanism, central banks can influence the market interest rates indirectly through their interest rate policy. In this context, let us now look at the performance of the US 10Y Treasury note and the key lending rate of the Federal Reserve (i.e. the effective fed funds rate).

US 10Y T-note (left scale), and effective federal funds rate (right scale; inverted), in %, 01/1982-04/2019



Source: Federal Reserve St. Louis, investing.com, Incrementum AG

¹⁹¹ The monetary policy of the Federal Reserve is based on a system of goals that consists of (a) maximum employment, (b) stable prices (CPI 2%), and (c) moderate long-term interest rates, whereas the ECB has only one primary goal: to ensure price stability (HICP close to but below 2%).

In the aftermath of the market rate having been held abnormally low for a decent period, there becomes a real risk of fragile assets cratering. The only thing that tends to go up at such times is cross-asset correlation.

Charles Gave

Low interest rates are like living in the Florida Keys – it's all sunshine until a hurricane hits, and then it's total devastation.

Michael E. Lewitt

Consistently loose monetary policy since the 1980s has pushed US bond prices gradually up. Even the abandonment by the Federal Reserve since 2014 of its ultra-loose monetary policy has to be seen from the perspective of 40 years of a bond price boom. The chart illustrates that even in the USA – where quantitative tightening got into full swing in 2018 – interest rates are still historically low.

In such an environment the central bank can cut interest rates only to a limited extent, if at all. **An environment of low or negative interest rates is thus detrimental to the option of hedging one's portfolio against falling stock prices through bond price gains. On the other hand, the more the key lending rates are stepped up and central bank balance sheets contract, the more bonds are suitable as stock diversifiers (*ceteris paribus*),** since the central bank now has significantly more room for maneuver with its conventional measures. However, in times of QE any analysis of the impact of monetary policy on bond prices that focuses only on conventional measures is incomplete.

Unconventional monetary policy

As part of unconventional measures such as QE programs, central banks buy government and corporate bonds on the secondary market. The increase in demand has downstream effects on buyers and sellers on the primary markets. All other things being equal, market interest rates will fall across the entire spectrum of maturities.

Can we therefore expect bond prices to rise on the back of unconventional measures in the future as well? While it is not unlikely, we have to bear in mind that unconventional measures, too, have limits. Sooner or later they reach practical, legal, economic, or political limits.

Practical and legal limits:

- **Every central bank has to deal with trust issues.** If the monetary policy measures implemented fail to achieve the defined goals, a central bank may run into a crisis of legitimization. Market participants might lose their trust in the actions of the central bank, and the bank might have a problem justifying its actions.
- **Jurisprudential or internal regulation of the central banks also often limits the uncontrolled expansion of unconventional measures.** The ECB, for example, has set itself limits for its purchases within the framework of the Public Sector Purchase Programme (PSPP). The so-called issuer limit constitutes an important threshold that prevents the ECB from buying more than 33% of the bonds of any one country.¹⁹² This limit has already caused the central bank problems and has been scrutinized and then reconfirmed by the European Court of Justice and the German Federal Constitutional Court.¹⁹³ Such regulations limit additional QE purchases and

¹⁹² See ECB: "Public sector purchase programme (PSPP) – Q&A", October 2, 2018

¹⁹³ See "Draghi will in die Verlängerung" ("Draghi wants extra time"), *Handelsblatt*, December 2, 2016

incentivize QT measures. However, that does not mean that the ECB could not find other alternatives and new instruments to expand and extend the QE program once this limit has been reached.

Cheap money becomes very expensive in the long run.

Daniel Lacalle

A significant part of the wealth of an economy is taken from those who wish to grow this capital and to employ it in more gainful ways and given to those who probably waste and consume it.

Adam Smith

(...) with every grant of complete security to one group, the insecurity of the rest necessarily increases. If you guarantee to some a fixed part of a variable cake, the share left to the rest is bound to fluctuate proportionally more than the size of the whole.

Friedrich August von Hayek

Economic limits:

- **Long-term QE programs also harbor the risk of substituting comparatively safe assets in the central bank balance sheet for riskier assets.** This is due to the fact that the supply of safe investments is limited (in contrast to the money supply). The gradual acceptance of riskier bonds could then undermine trust in the central bank.
- Lastly, the sustainable expansion of the money supply bears the risk of a sudden boost in inflation. As soon as the money created *ex nihilo* flows from the financial markets into the goods markets, asset price inflation (which has been observed for years) is followed by consumer price inflation. Rising consumer prices can then lead to the abandonment of the loose monetary policy.

Political limits:

- A lot of emphasis is put on the independence of the central banks, but they, too, cannot ignore societal and political pressure for ever. We can already hear criticism about the allegedly too restrictive monetary policy from presidents like Donald Trump or Recep Tayyip Erdoğan. Once the economic effects of the ultra-loose monetary policy become obvious, further criticism and the attempt to influence policies are not unlikely. This may also be achieved by favoring representatives of a looser monetary policy for positions at the top of the central bank.

We can see that unconventional measures in monetary policy are also subject to limits that are at odds with a never-ending decrease in market interest rates. The wiggle room of central banks with regard to monetary policy is not infinite. This being the case, one could argue that rather the opposite is taking place and that the boom that has been going on for almost 40 years in the bond markets will soon be drawing to an end. In view of the high level of global debt, which we already have explained earlier, and the ongoing zombification¹⁹⁴ of the economy, a significantly more restrictive monetary policy will be impossible to implement. Unless inflation soars and thus requires a drastic increase in interest rates, these factors suggest that we will not soon see an end to the monetary support of the bond bubble.

¹⁹⁴ See Adalet, Andrews and Millot, Valentine: "The Walking Dead?: Zombie Firms and Productivity Performance in OECD Countries", *OECD Economic Department Working Papers*, No. 1372, January 2017; see Adalet, Andrews and Millot, Valentine: "Confronting the zombies: Policies for productivity revival", *OECD Economic Policy Papers*, No. 21, December 2017; see Acharya, Viral V. et al.: "Whatever it takes: The real effects of unconventional monetary policy", *SAFE Working Paper No. 152*, last revision: May 8, 2017

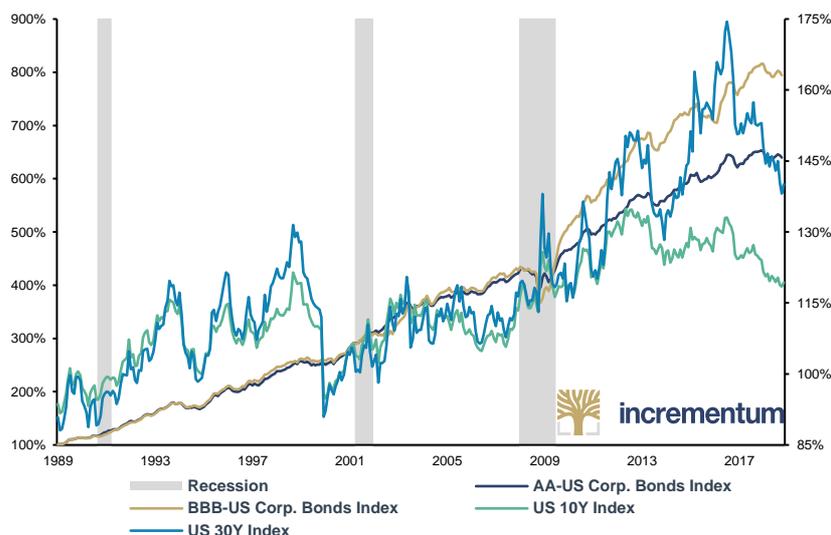
I think we injected cocaine and heroin into the system and now we are maintaining it on Ritalin.

Richard Fisher
Former president of the
Federal Reserve Dallas

Conclusion

In today's market environment, bonds seem to be of limited use as a classic hedge against falling stock prices. Due to still-low interest rates, bond prices continue to commend valuations close to their all-time-highs. This is true for corporate bonds as well.

US corporate bond index (left scale), and US Treasury bond index (right scale), 01/1989-11/2018



Source: Federal Reserve St. Louis, investing.com, Incrementum AG

Companies might have to start rotating out of the debt that they incurred to buy back their stock and start issuing stock.

Chris Whalen

We think that in such a scenario, bonds as a hedge against falling stock prices are to be handled with caution. The lower the general level of interest rates, the less suitable bonds are as a hedge. This is particularly true for the Eurozone, Switzerland, Japan, and other currency areas that are still dominated by a zero-interest-rate policy (ZIRP).

We have already pointed out that the correlation between 10Y US Treasury bonds and the S&P 500 changed its sign around the year 2000. While they used to be positively correlated, they have been negatively correlated since 2000. Another change in correlation (including a change of sign) cannot be ruled out for the future.¹⁹⁵ The structural risks can cause the default risk of bonds to be subject to revaluation in the event of future economic downturns and equity bear markets.

I have confidence in one thing: The Fed will blow it.

Robert Rodriguez

On the other hand, such an environment opens up perspectives for gold, which historically speaking has been suitable as a diversifier against falling stock prices and, in the case of physical investment, has no counterparty risk. As we have discussed in previous years, it is not so much the absolute level but rather the *tendency* of real interest rates (rising or falling) that determines the performance

¹⁹⁵ See "Possible Crisis Triggers and Catalysts", *In Gold We Trust* report 2018

of gold. Our analysis also revealed that negative and slightly positive real interest rates (up to +1.0%) are a good environment for gold.¹⁹⁶

We regard highly positive real interest rates as unrealistic in the long run due to the aforementioned factors of global debt and zombification of companies. **Given this scenario, we think that gold harbors better opportunities than bonds with respect to its future suitability as a stock diversifier. The following simple relationship holds true for bear stock markets: the looser the monetary policy, the better for gold.** However, one should not forget the creativity of central banks when it comes to the development of new monetary torture instruments and new interpretations of old regulations.

Gold performance before and during recessions

Info box: Definition of Recession periods

Although this may come as a surprise, there is no internationally standardized definition of the term *recession*. Whereas the decline of real GDP for two subsequent quarters is considered a technical recession in the euro area, recessions are determined differently in the USA. According to the National Bureau of Economic Research (NBER), an economy is in recession if a significant decline in economic activity has seized the majority of the economy and lasts for several months. Indicators are, among others, trends in GDP, real income, employment, and industrial production.

For investors, the problem with both definitions is this: A recession is usually only diagnosed once the economy is already past the worst. The deep recession in the aftermath of the Great Financial Crisis of 2007/2008 is a case in point: An unbelievable twelve months passed from the actual start of the recession to its official diagnosis by the NBER.

“I can’t see a recession!’ ‘Where’s the recession!’ I can’t tell you how much I hear this every single day. It’s like saying ‘I can’t smell the carbon monoxide.’ By the time you ‘see the recession’, your head’s sliced off. Such a ridiculous statement.”

Dave Rosenberg

In the previous section we have established that gold is suitable as a diversifier against falling stock markets. **In this section, we want to focus specifically on the development of gold and stock prices throughout recessions.**¹⁹⁷

The analysis of gold and stock markets is an integral part of every *In Gold We Trust* report.¹⁹⁸ Regular readers know that gold as an event hedge and safe haven should experience an upswing during recessions. If one were to use gold for tactical speculation, the exact timing would present difficult decisions. **At what point should one buy or sell? We want to cast a light on this question by analyzing the various phases of past recessions.**

Before having a detailed look at the individual phases, we need to focus on the long-term lead time. An upcoming

recession tends to announce itself through macroeconomic indicators. The interest spread between the long-term and short-term interest rates of US Treasury bonds is an important indicator. As we have already pointed out in the chapter “Status

¹⁹⁶ See “[The Extraordinary Portfolio Characteristics of Gold](#)”, *In Gold We Trust* report 2014; “[Portfolio Characteristics of Gold](#)”, *In Gold We Trust* report 2017

¹⁹⁷ Based on the data on recessions in the USA, as provided by the [National Bureau of Economic Research](#) (NBER).

¹⁹⁸ See “[Gold in a Portfolio Context](#)”, *In Gold We Trust* report 2015; “[Gold as Portfolio Insurance](#)”, *In Gold We Trust* report 2016; “[Portfolio Characteristics of Gold](#)”, *In Gold We Trust* report 2017

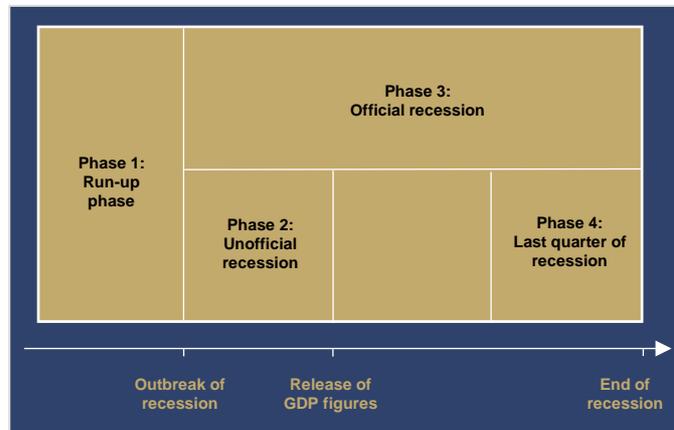
Quo”, the interest spread between long-term and short-term Treasury bonds is a very good lead indicator for forthcoming recessions with a relatively long lead time of 1-1.5 years. Closer to the imminent recession, the stock markets tend to have a lead time of six to nine months as they react with losses to the worsening economic outlook.

In the following, we will be analyzing all recessions in the US since 1970. To this end, the individual recessions will be subdivided into four phases:

- **1st phase: the run-up** (one quarter before the recession hits)
- **2nd phase: unofficial recession** (the period from the outbreak of the recession to the official release of the GDP growth figures by the statistics office –assumption: one quarter)
- **3rd phase: official recession**
- **4th phase: last quarter of the recession**

The following chart illustrates this sequence. Phase 2 (“Unofficial recession”) and phase 4 (“Last quarter of the recession”) occur during the officially established recession.

Sequence of phases



Source: Incrementum AG

We will look at the performance of the S&P 500 and gold during these four phases. Since the gold price is crucially affected by opportunity costs, we have also included the US Dollar Index¹⁹⁹, the US Consumer Price Index²⁰⁰, and the US key lending rate²⁰¹ in our analysis.

¹⁹⁹ Gold and the US dollar are negatively correlated; see “Gold in a Portfolio Context”, In Gold We Trust report 2015; “Portfolio Characteristics of Gold”, In Gold We Trust report 2017

²⁰⁰ To benchmark price increases, we used the development of consumer prices since they also crucially influence the monetary policy of the central bank.

²⁰¹ As measured by the Effective Federal Funds Rate. We have already addressed the relationship between gold price and interest rates in: “The extraordinary portfolio characteristics of gold”, In Gold We Trust report 2014; “Portfolio Characteristics of Gold”, In Gold We Trust report 2017

1st phase: the run-up

The run-up phase is defined as the short period of time that marks the transition from the economic boom phase to recession. It is also characterized by the transition from falling, but still positive, growth rates to negative growth rates. Another feature of the run-up phase is the continued increase in consumer prices. This should not surprise anyone who is familiar with the Austrian Business Cycle Theory.²⁰² In the preceding boom phase, loose monetary policy incited additional investments whose completion now requires additional, often not directly accessible resources. This leads to higher rates of price increases, which were not anticipated during the investment decision-making process. The leaps in prices point up the economic inefficiency of some investment projects. They have to be suspended or written off, heralding the recession. The increase in asset price inflation leads to a time-lagged increase in consumer prices.

Our understanding of the forces driving inflation is imperfect.

Janet Yellen

Let's now look at the last quarter prior to the recession and contextualize it with the performance of gold and the S&P 500. In the run-up phase, an elevated level of uncertainty is likely to be already priced into the stock markets. This means that the markets should have already incurred losses. Gold, on the other hand, is likely to benefit. For one thing, an increased level of uncertainty could support the gold price, and for another, relatively high consumer prices should stimulate the demand for gold. However, the still relatively high key lending rates at this stage should have a dampening effect on gold price performance.

Phase 1: Run-up phase – performance of the S&P 500 and gold, in %, 1970-2018

	Recession duration	Phase 1: Run-up Phase						
		S&P 500	Gold in USD	USDIX	CPI		Fed Funds Rate	
					Start	End	Start	End
1st Recession	Q1/1970 - Q4/1970	-1.8%	-8.9%	N/A	5.7%	5.9%	9.1%	8.9%
2nd Recession	Q1/1974 - Q1/1975	-8.0%	-10.9%	4.1%	8.1%	8.9%	10.1%	10.0%
3rd Recession	Q2/1980 - Q3/1980	7.1%	70.1%	3.1%	13.9%	14.6%	13.8%	16.7%
4th Recession	Q4/1981 - Q4/1982	-7.4%	-14.6%	1.2%	10.8%	11.0%	19.0%	16.0%
5th Recession	Q4/1990 - Q1/1991	-10.7%	7.1%	-6.4%	4.8%	6.2%	8.2%	8.2%
6th Recession	Q2/2001 - Q4/2001	-5.7%	-1.5%	2.6%	3.7%	3.0%	5.9%	5.3%
7th Recession	Q1/2008 - Q2/2009	0.5%	21.6%	-2.9%	3.6%	4.1%	4.7%	4.3%
	Average:	-3.9%	6.1%	0.2%				

* End refers to the end of the "run-up phase", not to the end of the recession altogether.
Source: Federal Reserve St. Louis, investing.com, Incrementum AG

The stock price performance shows that our original hypothesis was true for stocks almost all the way through. The run-up phase of 1980 is the one exception, when the S&P 500 managed to gain close to 7%. The index was also just about positive in

²⁰² In this context, see Taghizadegan, Rahim, Stoeflerle, Ronald, and Valek, Mark: [Austrian School for Investors: Austrian Investing between Inflation and Deflation](#). 2014

Today, many investors are what my late father-in-law used to call “handcuff volunteers”. They are doing what they have to do, not what they want to do.

Howard Marks

the run-up to the financial crisis in 2009. Overall, the S&P 500 has lost an average of 3.87% in the run-up phase of a recession.

In contrast, the gold price fluctuates widely. There were run-up phases where gold incurred significant losses (1970, 1974-75, and 1981-82). On the other hand, gold recorded significant increases prior to the recessions of 1980, 1990, and 2008-2009. The run-up phases of 1980 and 1981-82, in particular, were characterized by a sharply rising price level, to which the Federal Reserve under the chairmanship of Paul Volcker reacted with a surprisingly tight monetary policy. In this scenario, gold and stocks at first recorded huge gains in the run-up to the recession. Gold was riding a strong bull market at the time, setting a high of USD 850 per ounce – a level it would reach again only in 2007, in the run-up to the Great Financial Crisis. The gold correction of 1982 has to be seen in this context.

The development of consumer prices confirms our original hypothesis:

They continue to rise at the outset of a recession. What does come as a surprise, though, is the development of the effective fed funds rate in the USA, which is typically already falling at this early stage (with the exception of the recession of 1980).

Conclusion:

Overall, the run-up phase of a recession is a difficult period for stocks, judging by historical data. They have shed an average of 3.78% of their value. Only in times of high inflation (1980) did stocks post significant gains (+7.06%) during a run-up phase. **Gold paints a mixed picture. While it managed to gain an average of 6.08%, the price explosion in 1980 skews this average substantially. In some other run-up phases, gold incurred losses. Therefore, the run-up phase is difficult to navigate in terms of predictability for gold investors.**

2nd phase: unofficial recession

Disease is the body’s attempt to cure itself. Disease is the cure. It’s a healing process.

Dr. Isaac Jenning

Now let’s take a look at the unofficial recession phase. It stretches from the actual beginning of the recession to the official announcement of the recession.²⁰³ This period of time, which typically lasts about one quarter, is particularly interesting, because at that point the recessionary shrinking of the economy has not been officially confirmed. The emerging recession has been supported only by leading indicators such as surveys, but not by hard facts. At that point it is still unclear whether the economy will only be taking a breather or an actual recession is imminent. In the following, please find the detailed results of our analysis.

²⁰³ To contain the model, our premise is that the GDP figures are released three months after the actual beginning of the recession.

Phase 2: Unofficial recession – performance of the S&P 500 and gold, in %, 1970-2018

	Recession duration	Phase 2: Unofficial Recession						
		S&P 500	Gold in USD	USDIX	CPI		Fed Funds Rate	
					Start	End	Start	End
1st Recession	Q1/1970 - Q4/1970	-4.6%	-6.6%	N/A	6.2%	6.1%	8.9%	7.8%
2nd Recession	Q1/1974 - Q1/1975	0.3%	58.5%	-0.6%	9.6%	10.1%	9.7%	9.2%
3rd Recession	Q2/1980 - Q3/1980	-2.1%	-22.8%	-5.9%	14.6%	14.3%	17.9%	9.6%
4th Recession	Q4/1981 - Q4/1982	2.9%	0.8%	-2.7%	10.3%	8.9%	15.2%	12.4%
5th Recession	Q4/1990 - Q1/1991	-0.1%	-3.3%	-2.2%	6.4%	6.3%	8.1%	7.3%
6th Recession	Q2/2001 - Q4/2001	1.3%	3.8%	2.1%	3.2%	3.2%	4.9%	4.0%
7th Recession	Q1/2008 - Q2/2009	-10.2%	14.4%	-4.7%	4.3%	4.0%	4.0%	2.7%
Average:		-1.9%	4.1%	-2.4%				

* "End" refers to the end of the phase of the "unofficial recession", not to the end of the recession altogether.
Source: Federal Reserve St. Louis, investing.com, Incrementum AG

But in truth neither the boom, nor the debt deflation (...) and certainly not a recovery can go on forever. Each state nurtures forces that lead to its own destruction.

Hyman P. Minsky

The unofficial recession phase includes falling consumer prices and falling key lending rates. Surprisingly, the US dollar also tends to depreciate significantly throughout this stage, as measured by the US dollar Index (with the exception of the 2001 recession). At this early stage of the recession, the US dollar is apparently unable to rely on its strength as global lead currency and safe haven. However, gold is not in a position to fully exploit the weakness of the US dollar. Across the various recessions, gold does not paint a clear picture. During the stagflation of 1975, gold gained a drastic 58.5%, whereas it shed a sizeable 22.8% of its value in 1980.²⁰⁴

Stocks do not seem to follow a standard path in this early phase, either. While on average they have recorded a loss of 1.88%, they have also achieved slightly positive yields in the run-up phase of almost half of recessions. This may be due to the fact that early investors are already focused on the rebound that will follow the recession and manage to identify purchase opportunities even at this early stage of the recession.

Conclusion:

Neither gold nor stocks follows a clear pattern during the phase of unofficial recession. The specific features of a recession seem to play an important role during this phase. Investors should analyze these pivotal factors very carefully before taking an investment decision.

3rd phase: official recession

The third phase is the official recession. It covers the entire duration of the recession, i.e. from the beginning of phase 2 to the end of phase 4.

²⁰⁴ One has to put the latter loss into perspective, though: In the run-up phase to the 1980 recession, gold gained a massive 70.0%.

An analysis of the data below immediately reveals that both gold and the US dollar Index have posted gains on average during the the official recession phase: Gold was up 20.17%, and the US dollar appreciated by 4.16%. To this extent, gold and the US dollar seem to live up to their reputation as safe havens. We can also see that the monetary policy of the central bank during this phase was clearly expansionary. The effective fed funds rate decreased across all recessions we analyzed.

Phase 3: Official recession – performance of the S&P 500 and gold, in %, 1970-2018

		Phase 3: Official Recession						
		S&P 500	Gold in USD	USDX	CPI		Fed Funds Rate	
Recession duration					Start	End	Start	End
1st Recession	Q1/1970 - Q4/1970	-7.1%	0.0%	N/A	6.2%	5.6%	8.9%	5.0%
2nd Recession	Q1/1974 - Q1/1975	-15.0%	89.7%	-3.4%	9.6%	10.5%	9.7%	5.6%
3rd Recession	Q2/1980 - Q3/1980	7.7%	-5.9%	-5.8%	14.6%	12.8%	17.9%	10.6%
4th Recession	Q4/1981 - Q4/1982	12.8%	1.2%	8.4%	10.3%	3.8%	15.2%	8.8%
5th Recession	Q4/1990 - Q1/1991	13.8%	-7.9%	1.3%	6.4%	4.8%	8.1%	6.2%
6th Recession	Q2/2001 - Q4/2001	-8.1%	5.4%	2.1%	3.2%	1.6%	4.9%	1.9%
7th Recession	Q1/2008 - Q2/2009	-50.4%	16.3%	13.8%	4.3%	-0.5%	4.0%	0.2%
Average:		-10.5%	20.2%	4.2%				

* End refers to the end of the phase of the "official recession", i.e. to the end of the recession altogether.
Source: Federal Reserve St. Louis, investing.com, Incrementum AG

Our analysis shows that adding 2%, 5% or 10% in gold over the past decade to the average pension fund portfolio would have resulted in higher risk-adjusted returns.

World Gold Council

Being ready for the opportunity is preparation for success. Opportunity comes by chance - being ready never!

Sam Rayburn

For stocks, the recession is unsurprisingly a very difficult environment. S&P 500 investors have had to accept average losses of 10.47%. That being said, the recessions of 1980, 1981-82, and 1990-91 occurred in the context of economic troughs where the S&P 500 was able to bounce back enormously and thus recovered its losses from the run-up phase (and in some cases more than that).

Conclusion:

The historical data show that gold and the US dollar have recorded significant gains across the recessionary cycle. This comes as a surprise, given that under normal circumstances gold and the US dollar are strongly negatively correlated.

This means that investors have to be vigilant a phase earlier, i.e. during the unofficial recession, to detect any opportunities in gold or the US dollar. Our historical analysis suggests that this phase presents good opportunities to take positions, not the least since gold and the US dollar complement each other quite well. We can find only one recession, in 1980, where both lost a significant share of their value (almost 6%). The gold

correction at that point, however, was the result of the preceding gold boom, where gold investors had made substantial profits.

4th phase: the final quarter of the recession

Phase 4 spans the final quarter of the recession. Here, we are going to have a look at the performance of gold and the S&P 500 during this phase. It is a fair assumption to make that at this point the stock market has already anticipated that the recession is ending. Also, by this late stage of the recession drastic measures in monetary and fiscal policy will have been taken in reaction to the crisis. Low interest rates and fiscal stimulus measures create a sense of optimism in the market even if they often fail to remedy the underlying cause of the crisis. Therefore, one would expect stocks to pick up momentum and perform positively in the final phase.

The theoretical interpretation is not quite as straightforward for gold. On the one hand, the final phase of a recession can be an abundantly difficult environment. Uncertainty and economic weakness have already been priced in, and disinflation, deflation, or low inflation should also be somewhat detrimental to gold's performance. On the other hand, any (further) depreciation of the US dollar,²⁰⁵ continued loose monetary policy, or the expectation of future price rises could be supportive to the performance of gold. Let's look at the data:

Phase 4: Final phase of the recession – performance of the S&P 500 and gold, in %, 1970-2018

	Recession duration	Phase 4: Final Phase of the Recession						
		S&P 500	Gold in USD	USDIX	CPI		Fed Funds	
					Start	End	Start	End
1st Recession	Q1/1970 - Q4/1970	7.0%	5.9%	N/A	5.6%	5.6%	6.2%	5.0%
2nd Recession	Q1/1974 - Q1/1975	16.6%	-1.1%	-3.0%	11.8%	10.5%	7.3%	5.6%
3rd Recession	Q2/1980 - Q3/1980	10.0%	21.8%	0.0%	13.2%	12.8%	9.1%	10.6%
4th Recession	Q4/1981 - Q4/1982	15.9%	14.2%	-1.8%	5.0%	3.8%	9.8%	8.8%
5th Recession	Q4/1990 - Q1/1991	13.9%	-4.7%	3.6%	5.7%	4.8%	6.9%	6.2%
6th Recession	Q2/2001 - Q4/2001	0.5%	1.3%	2.7%	2.1%	1.6%	2.5%	1.9%
7th Recession	Q1/2008 - Q2/2009	-18.0%	24.0%	4.0%	-0.1%	-0.5%	0.2%	0.2%
	Average:	5.9%	8.3%	0.9%				

* End refers to the end of the "final phase of the recession", i.e. to the end of the recession as such.
Source: Federal Reserve St. Louis, investing.com, Incrementum AG

Precious metals are the most secure insurance policy that you can buy to protect your financial house. Even as it begins to burn down.

Bob Moriarty

We find that our hypothesis, according to which stocks should post significant gains in the final stages of the recession, has been largely confirmed in the past. With the exception of the recession in the aftermath of the Great Financial Crisis of 2007/2008, the S&P 500 has recorded large profits in the final stages of a recession. Stocks were coming out of the trough and gained an average 5.90% by the end of the recession.

²⁰⁵ A flight to the global lead currency, the US dollar, is not uncommon during economic crises. We have already established the negative correlation between the US dollar and gold in the following articles: "[Gold in a Portfolio Context](#)", *In Gold We Trust* report 2015; "[Portfolio Characteristics of Gold](#)", *In Gold We Trust* report 2017

On the other hand, the performance of gold, which gained an average of 8.27% despite an appreciating US dollar and still-falling consumer prices, is surprising. The fact that the key lending rates were still declining in this phase seems to have supported gold prices.

The recession in the aftermath of the 2007/2008 financial crisis was special. The S&P 500 did not even rebound in the final phase, but instead incurred a significant loss, 17.98%. Meanwhile, gold gained 24.0% during the same period, while the US Dollar Index was up a comparatively modest 3.96%.

Conclusion:

The biggest bubble out there is in confidence. Overconfidence is why negative yielding &/or clearly unrepayable debts & risk assts priced at 5,000yr highs are in high demand while systemic insurance can't catch a bid. Only those who feel fireproof, have no use for fire insurance.

Simon Mikhailovich

If the crisis is not a systemic one and if the central bank still has wiggle room in its monetary policy, both stocks and bonds tend to post significant gains in the final phase of a recession. Due to its safe-haven character, gold can also benefit from fully fledged systemic crises and thus provides effective protection for the portfolio against black swan events. However, the difficult thing for investors to master is to identify the final phase. During the recession, one does not usually know how long it will last. The aforementioned interest spread between short-term and long-term US Treasury bonds can be of help here. If it has already clearly recovered from its low during the run-up phase of the recession, this may be read as a signal that the economy is coming out of the trough.

Summary

“Nobody knows how the biggest monetary experiment of all time will end. The alleged omnipotence of the central banks may turn into impotence at some point. It is therefore better to have insurance and not need it, than to need it and not have insurance. Gold fulfills exactly this function.”

Flossbach von Storch

In conclusion, we want to merge the performance of gold and the S&P 500 during the individual phases of a recession into one table. We have also added the performance of gold in EUR.

Overview: performance of the S&P 500 and gold, in USD and EUR, in % 1970-2018

	Recession duration	S&P 500				Gold in USD				Gold in EUR			
		Phase 1	Phase 2	Phase 3	Phase 4	Phase 1	Phase 2	Phase 3	Phase 4	Phase 1	Phase 2	Phase 3	Phase 4
1st Recession	Q1/1970 - Q4/1970	-1.8%	-4.6%	-7.0%	7.0%	-8.9%	-6.6%	0.0%	5.9%	N/A	4.6%	11.1%	3.0%
2nd Recession	Q1/1974 - Q1/1975	-8.0%	0.3%	-15.0%	16.6%	-10.9%	58.5%	89.7%	-1.1%	7.2%	51.8%	51.0%	-6.2%
3rd Recession	Q2/1980 - Q3/1980	7.1%	-2.1%	7.7%	10.0%	70.1%	-22.8%	-5.9%	21.8%	27.5%	0.5%	20.2%	-1.6%
4th Recession	Q4/1981 - Q4/1982	-7.4%	2.9%	12.8%	15.9%	-14.6%	0.8%	1.2%	14.2%	2.6%	-4.8%	21.0%	10.4%
5th Recession	Q4/1990 - Q1/1991	-10.7%	-0.1%	13.8%	13.9%	7.1%	-3.3%	-7.9%	-4.7%	4.6%	-9.3%	-12.2%	-3.6%
6th Recession	Q2/2001 - Q4/2001	-5.7%	1.3%	-8.1%	0.5%	-1.5%	3.8%	5.4%	1.3%	-0.8%	8.3%	5.5%	-4.4%
7th Recession	Q1/2008 - Q2/2009	0.5%	-10.2%	-50.4%	-18.0%	21.6%	14.3%	16.3%	24.0%	2.2%	12.2%	31.4%	19.8%
	Average:	-3.9%	-1.9%	-10.5%	6%	6%	4%	20%	8%	7%	8%	23%	2%

Source: Federal Reserve St. Louis, investing.com, World Gold Council, Incrementum AG

Knowledge is of no value unless you put it into practice.

Anton Chekhov

Remarkably, gold posted significant average gains across the entire recessionary cycle both in USD and in EUR in every phase, whereas stocks (as measured by the S&P 500) recorded significant profits only in the final stage of recessions. **Thus, gold managed very well to compensate for the stock losses in phases 1, 2, and 3.** Also, the higher the losses of the S&P 500, the better gold has performed.

In summary, gold has been excellent at offsetting stock losses during recessions. Thus, we expect gold to record substantial gains and act as a hedge against bear stock markets in the future as well. However, we are less optimistic about bonds, the classic stock diversifier. High debt, the zombification of the economy, and monetary policy that is still very loose by historical standards combine to undermine the ability of bonds to act as a stock diversifier. Therefore, gold is positioned to remain an indispensable component of the portfolio in the future, as it lets the investor navigate stressful passages in the market with relative ease.



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Gold Storage: Fact Checking Liechtenstein, Switzerland, and Singapore

“The key is not to predict the future, but to be prepared for it.”

Pericles

Key Takeaways

- **Better safe than sorry:** The whole point of holding physical gold revolves around wealth protection and hedging against the risks of the financial and banking system. If the storage location doesn't align with those goals, the strategy is defeated.
- Liechtenstein, Switzerland and Singapore are among the top candidates for investors looking for a safe and reliable jurisdiction to store their gold.
- Legal, geopolitical and economic stability are key factors to consider, but so is a country's “gold culture” and its relevant tradition and track record.

Why we should care about safe storage of precious metals

“History speaks only to those people who know how to interpret it.”

Ludwig von Mises

After all, culture is wealth. Without well-being, without wealth, there never has been culture.

Ludwig von Mises

The entire reasoning behind investing in and holding of physical precious metals, especially when kept outside the banking system in private high-security storage facilities, revolves around the concepts of trust, security, risk diversification and hedging against the vulnerabilities and worst-case scenarios of the current monetary system. Thus, the choice of storage location must also be largely evaluated through the same lens.

The main factors to be considered when choosing a jurisdiction in which to store private gold are the level of protection of individual financial freedom and of private property rights; political and economic stability; and the government’s predictability, restraint, and historical track record. According to these measures, three countries stand out from the rest: Switzerland, Liechtenstein, and Singapore.

Liechtenstein’s unique advantages

“For hundreds of years, the Liechtenstein family has abided by the law it set itself. According to this House Law, the Prince watches over the “reputation”, esteem and welfare” of the Princely House of Liechtenstein.”

Prince Hans-Adam II

As our company is based in Liechtenstein, we would like to start with this small but strong bastion of liberty and stability. The Principality of Liechtenstein has not joined the EU but is a member of the European Economic Area and the Schengen Area. Although it became independent in 1806, it can be argued that the history and the values of today’s Liechtenstein were mainly formed after WWII. It was then that today’s reigning Prince of Liechtenstein, Prince Hans-Adam II, had to take over a bankrupt country and effectively managed to turn it into a highly competitive, innovative, and agile financial hub of international renown. Liechtenstein is led by one of the oldest noble families in European history, whose roots go back to the 11th century. They have a long-established history as advisors, especially during the Habsburg Monarchy.

The country’s standing as a reliable business and banking center and the princely house’s reputation for being ahead of the curve are undeniable today. For example, Liechtenstein and members of the princely

We in the Princely House are convinced that the Liechtenstein monarchy is a partnership between the people and the Princely House, a partnership that should be voluntary and based on mutual respect.

Prince Hans-Adam II

We therefore support the right of self-determination at the municipal level, in order to end the monopoly of the State over its territory.

Prince Hans-Adam II

family have established the European Center for Austrian Economics (ECAEF)²⁰⁶ under the guidance of Prince Michael and Prince Philipp of Liechtenstein. The ruling families of Liechtenstein fully embrace the values of individual and financial freedom and recognize the importance of private property rights. Property rights are even further protected given the fact that Liechtenstein has no emergency legislation. Even in times of political or economic upheaval, an ad-hoc expropriation is thus unenforceable.

The system of government is classified as a constitutional monarchy, with the decision-making power being shared by the monarch and the democratically elected parliament. The Prince retains significant political power as head of state, and also has veto power. However, there are key exceptions and limitations to the Prince's authority, as the people have the right to abolish the monarchy if they choose to, or to launch an initiative of no-confidence against the prince, with only 1,500 signatures required to kickstart both processes.

Prince Hans-Adam II himself wrote the political treatise *The State in the Third Millennium* (2009), in which he promotes sound money like gold and silver. In this book, which we highly recommend, he also defends the right of secession right down to the level of the municipality; and he is a fierce proponent of limited government, free trade, and free speech.

Overall, Liechtenstein remains a very solid jurisdiction candidate. It is built on a system of governance that shows great restraint and respect towards individual freedom, private property, the right to privacy, and the financial sovereignty of its people. From a military aspect, Liechtenstein is protected by the Swiss military and has strong ties with Switzerland in general, although being fully sovereign with respect to local laws and international policy.

As a clear exception to the global trend, Liechtenstein has been running budget surpluses for years, signaling not only financial prudence but also providing the country financial leeway in case of a severe economic crisis. In 2017 the budget surplus amounted to CHF 196.1mn, or 3.2% of GDP. Both the central government, the local government, and the social security funds record significant surpluses. Per December 31st, 2016, the net worth of Liechtenstein's public assets added up to CHF 7.1bn or 116% of GDP.

Finally, another development that is clearly indicative of Liechtenstein's agility, adaptability, and competitiveness is the way the principality embraced the cryptocurrency industry very early in its adoption curve. Liechtenstein made sure to provide an attractive and welcoming environment for entrepreneurs, investors, and startups in the nascent sector, at a time when many still viewed it with suspicion or even failed to understand its fundamental advantages and true potential. As result, the tiny country has evolved into a crypto hub, rivalling that of the "crypto valley" of Zug in Switzerland.²⁰⁷

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²⁰⁶ www.ecaef.org

²⁰⁷ Mark J. Valek conducted an interview with the current Prime Minister of the Principality of Liechtenstein, Adrian Hasler, on "[Liechtenstein's Blockchain Strategy](#)".

The case for Switzerland

“The economy was everywhere and politics nowhere.”

Lorenz Stucki

Let us continue with our neighbor Switzerland. A nation defined by its own people’s will, having taken an oath not to pay taxes to foreign reeves. Even before the enforced confederation of 1848, Switzerland was among the most industrialized countries in mainland Europe. The economy was everywhere and politics nowhere. Even under intense external pressures, Switzerland retained its sovereignty and remained an armed neutral country, resisting both world wars. Up to this day, it still has one of the most decentralized political structures in the world. Its constitution outlines the basis of its political system and its government’s limits, according to the principles of subsidiarity and direct democracy.

Some people think the entrepreneur is a mangy wolf to be killed. Others see him as a cow that can be milked without interruption. Only a few recognize him as the horse pulling the cart.

Winston Churchill

The core idea of the people being vested with meaningful decision-making power, i.e. by asking the individual voter in referenda, and of solving every important problem on the lowest possible level, i.e. the principal of subsidiarity, is part and parcel of Switzerland’s historical DNA. Under this system, whenever politicians want to change laws, the people will always have the final say. Instruments such as referendums “against the state” and initiatives “from the people” help to keep the state in check and the country as decentralized as possible. And although the last 20 years have seen political pressure put on Switzerland to follow the way paved by the EU rather than its own traditional path, the system itself remains solid. Unlike its neighbors, the Swiss government, the Federal Council or Bundesrat, still does not have the power to enforce questionable policies unchecked by the people until the next election.

We want to trust in the one highest God and never be afraid of human power.

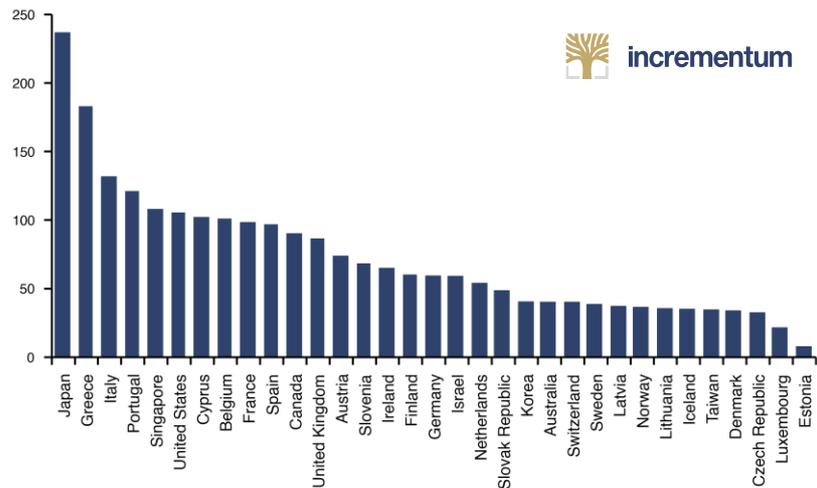
Rütli Oath 1291

The practical impact of this key political differentiation that sets Switzerland apart from other countries, is extensive and often surprising. As a real, direct democracy, Switzerland has time and time again gone against the grain, defying political trends set by its neighbors or the international community. Past votes with impressive outcomes include the rejection of a proposal to increase mandatory vacation to six weeks, as well as the decision not to become part of the European Union. Another loud and clear message the Swiss people sent was on the concept of the Universal Basic Income (UBI). While other countries pressed forward with UBI experiments, simply giving people money without any prerequisites, employment-seeking requirements, or any means test whatsoever, the Swiss refused to entertain the notion and voted down the initiative by a crushing majority. They simply understood that the government cannot give away what it has received as tax from someone else; and as it turned out, quite predictably, this was a wise decision, as most experiments hitherto implemented, like that in Finland, have already failed miserably.

Switzerland’s economy also makes the case for it being an excellent location for a physical gold investor. In stark contrast to its EU neighbors

and the EU as a whole, the Alpine nation is much more prudent in managing its finances. In fact, according to the latest figures, Switzerland has achieved a significant budget surplus, 10 times higher than forecast. In mid-February, the Swiss government announced a surplus of the federal budget of CHF 2.9bn (EUR 2.38bn) for 2018, on the back of another similar surplus of CHF 2.8bn in 2017. The gross federal debt has now dropped below CHF 100bn for the first time since 1997; and the general government debt (confederation, cantons, municipalities, social insurance) amounts to little less than CHF 200bn, stable in absolute figures, with a declining tendency relative to GDP.

Public Debt, in % of GDP, 2018



Source: IMF, Incrementum AG

Overall, Switzerland’s success is largely based on the fact that it was built on economic rationality and not on politics, and thus the Swiss have always been open to innovation. An apt example of this way of thinking is the country’s warm welcome to the crypto revolution and its success in attracting a great number of leading companies from the sector, giving rise to a buzzing and vibrant business environment with great growth potential in its “crypto-valley” in the canton of Zug.

Switzerland’s success is largely based on the fact that it was built on economic rationality and not on politics.

Claudio Grass

In terms of stability and security, especially from a physical gold investor’s point of view, it is clear that Switzerland has withstood the test of time. Its long-standing neutrality position, its solid noninterventionist foreign policy record, and the fact that more than 50% of households in the country are armed, create a safe environment and provide peace of mind both for its citizens and for investors. Furthermore, the strict limits placed on its government’s powers and the long track record of the government staying well within those limits, make confiscation scenarios of precious metals stored under Swiss law very improbable. Such a move would require a historic constitutional shift; the Swiss people would have the final say on it; and their voting record speaks for itself. Thus, Switzerland can certainly be relied upon as a safe haven.

Singapore, the strongest contender in Asia

“Why did Singapore develop and not the others; what was missing in the others? I could only tell Valéry Giscard d’Estaing what I thought were three primary reasons: first, stability and cohesion in society; second, a cultural drive to achieve and a thrifty, hardworking people always investing in the future, with high savings for a rainy day and for the next generation; third, a great reverence for education and knowledge.”

Lee Kuan Yew

This brings us to our final candidate, Singapore, a country that has experienced significant capital inflows over the past decades. The island lying on the equator in Southeast Asia has no capital gains taxes, no goods and services taxes (GST) on investment-grade precious metals, and a strong record of respect for private property rights. Without question a genuine and impressive success story, especially since its independence in 1965, Singapore was built and developed according to the vision and under the guidance of Lee Kuan Yew. His achievements are indeed remarkable, particularly given the time frame in which they were completed.²⁰⁸

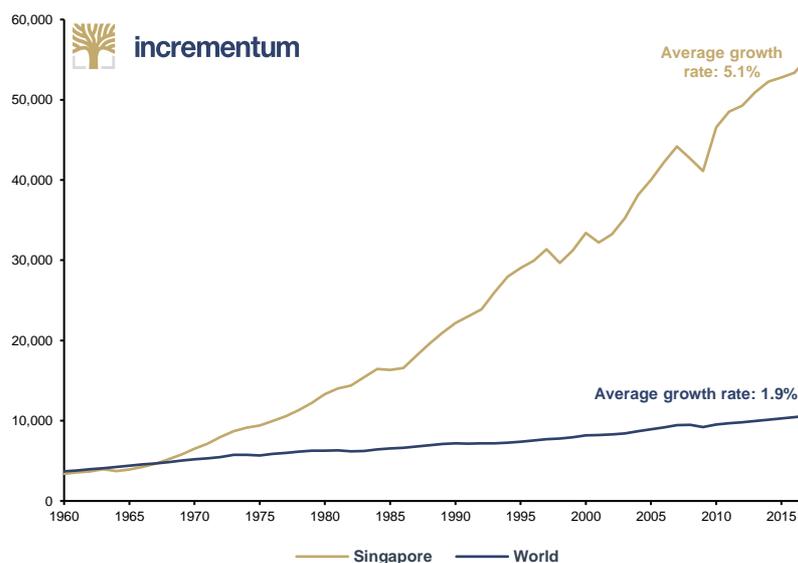
I’m often accused of interfering in the private lives of citizens. Yes, if I did not, had I not done that, we wouldn’t be here today.

Lee Kuan Yew

The sunny island-state in Southeast Asia has been widely celebrated as an economic miracle. It has a unique geographical advantage, being strategically located at the crossroads of key trade and shipping routes of the world, while also enjoying proximity to China. Conceptionally created as a “city state”, it has become one of the most developed economies in Asia. It boasts an ever-improving infrastructure and has emerged as global business and financial hub. It is also well recognized as one of the world’s most competitive and business-friendly economies. Additionally, its tax regime and regulatory framework are simple and investor-friendly. In fact, the Singaporean legal system as a whole has been globally recognized for its efficiency, while the country is the least bureaucratic of the continent, indeed the globe. Business owners and investors have comparatively very little red tape to contend with, while all legal proceedings are relatively fast. What’s more, Singapore also offers a stable political environment and a robust economic background, with a rapidly and consistently rising GDP over the past decades.

²⁰⁸ See Lee Kuan Yew: From Third World to First: The Singapore Story: 1965-2000. 2000

Global GDP per capita, and Singapore GDP per capita, in USD, 2018



Source: World Bank, Incrementum AG

However, Singapore does have some key differences to both Alpine candidates. As it was created based on a top-down approach, in an economically poor environment, and with a much more heterogenous population, such a success story would have probably not been possible within this short period of time without a strong leader such as Lee. **As a result, and quite unsurprisingly,**

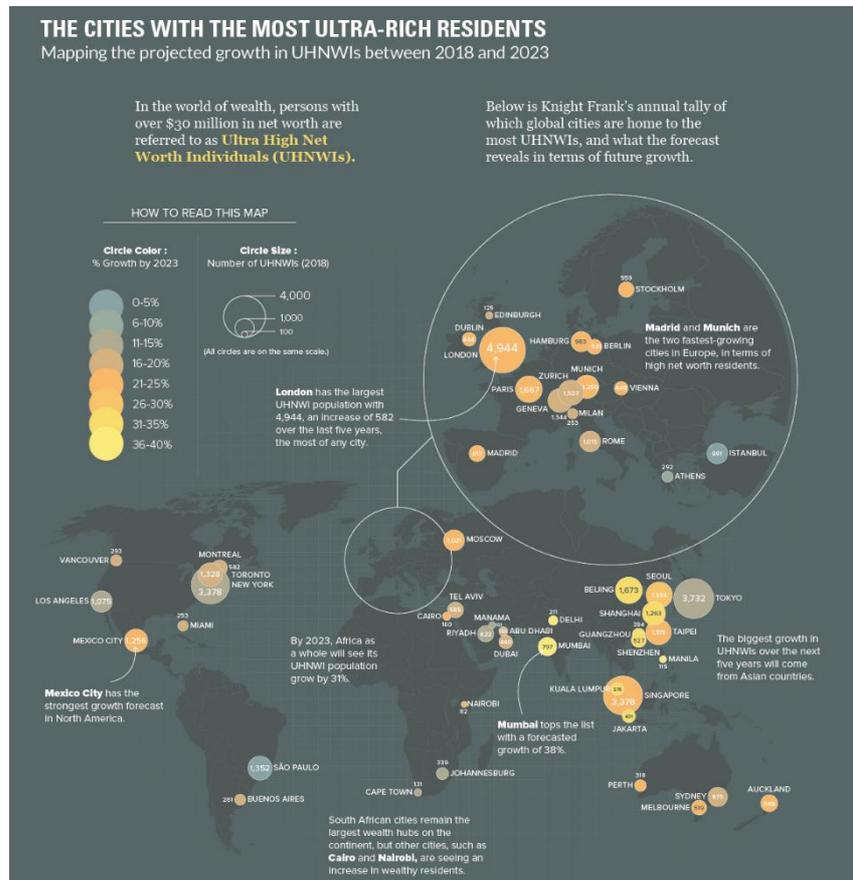
The measure of man is what he does with power.

Plato

Singapore does not have as stellar a reputation as its aforementioned peers when it comes to individual liberties. It is however without a doubt a leader in the Asian context, and we can be optimistic about the upholding of individual freedoms in Singapore as the city state continues to mature. A quick look at the infographic below shows that ultra-high-net-worth individuals, i.e. individuals with a net worth of at least USD 30mn in constant 2018 US dollars,²⁰⁹ from around the globe continue to vote with their feet, choosing to call Singapore home.

²⁰⁹ See Wealth-X: "Ultra Wealthy Analysis: The World Ultra Wealth Report 2018", September 5, 2018

Cities with the most ultra-rich residents, projected growth in UHNWI's between 2018 and 2023



Source: Visual Capitalist

I learned to ignore criticism and advice from experts and quasi-experts, especially academics in the social and political sciences. They have pet theories on how a society should develop to approximate their ideal, especially how poverty should be reduced and welfare extended. I always try to be correct, not politically correct.

Lee Kuan Yew

It can also be argued that Singapore hasn't passed the test of time yet, nor has it been "stress-tested" during extreme crises and conflicts, like the other candidates were during World War II. On closer inspection, this might not be totally accurate. While modern Singapore is only 50 years old, its DNA has been molded by managing and overcoming the many stresses it has had to deal with. Militarily and geopolitically, Singapore closely resembles Israel in the Middle East. Singapore is a country surrounded by larger and sometimes adversarial countries. It is a little-known fact that Israel was the first country to recognize Singapore, back in 1965, and the young Singaporean army was even trained by Israel in the early years.

Geopolitically, Singapore has had to face many security threats of its own. For example, there was a threat of invasion from Indonesia when it executed a pair of Indonesian sailors found guilty of detonating a bomb in 1968, killing 3 people in the process. Malaysia, Singapore's neighbor to the north has also been active in trying to sabotage Singapore economically by often threatening to withhold the water exports that Singapore needs, to force a reunification on Malaysian terms. Singapore has withstood these tests well so far, and the nation it is today is a result of the continuous stress tests it has found itself faced with.

Lastly, as the conversation surrounding wealth taxes increases in volume in the West, capital controls are still socially and culturally not acceptable in Singapore.

People can have a long-term life plan only if they know their private property is secure.

Mencius

Economic freedom is viewed as an ultimate right in Singapore, with the government acting as a guardian and arbiter of that right for its citizens.

As Europe is by all accounts going more and more down the road of centralization and as economic and social tensions are increasingly prevalent throughout the Continent, Switzerland and Liechtenstein might be seen as being right in the eye of a coming storm. By contrast, Singapore could be better off and even have a competitive advantage in this regard, not only because of its geographical distance from Europe, but also because it could provide additional diversification by being in the Asian rather than the European economic and geopolitical sphere.

Weighing the options

“If you are sick, think about your life; if you are better, think about your gold.”

Mongolian Proverb

We cannot direct the wind. But we can adjust the sails.

Aristotle

All in all, when it comes to prudent and long-term investments in physical precious metals, one size most definitely does not fit all. Each decision and step that forms a comprehensive and solid strategy needs to take into serious consideration the individual needs and aims of the investor. While security and strong property rights play a key role for all investors, specific circumstances and relevant technicalities might make one jurisdiction more attractive than another.

All three jurisdictions make a convincing case for secure gold storage with regard to stability and private property rights, a case that is infinitely strengthened when we compare the risks and uncertainties that most other jurisdictions entail. Even from a more practical perspective, it makes sense to store gold in jurisdictions with ready access to active commercial gold markets that are not bank-based, as is London, for example. Switzerland is a global leader and hub of gold refining and has extensive and vibrant commercial bullion activity. Singapore, being in Asia, also has a very well-developed commercial gold market.

Overall, although no one knows what the future will bring, when selecting a location to store your wealth in physical precious metals, you should look carefully at the political system as well as the government’s track record through thick and thin. It is also important to consider the country’s gold culture and relevant tradition, as in nations with a long history of widespread private gold ownership, governments face formidable obstacles and serious opposition against aggressive legislation such as ownership restrictions, seizures, or confiscation orders targeting precious metals. **Thus, overall, Switzerland and Liechtenstein could be seen to have an advantage, with Singapore being an equally strong option, especially for investors with an affinity for Asia.**

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History Does (not) Repeat Itself – Plaza Accord 2.0?

“Only with decisive adjustments in monetary and fiscal policy will it be possible to stabilize exchange rates and with them the global economy.”

Barry Eichengreen

Key Takeaways

- In the first half of the 1980s the US dollar appreciated significantly, and large current account imbalances emerged. The Plaza Accord of September 22, 1985 was concluded in order to counter this problem.
- In order to prevent a pronounced US dollar depreciation in the wake of the Plaza Accord, it was decided to stabilize the US dollar in the Louvre Accord of February 22, 1987. However, this attempt at stabilization failed.
- In view of the strong US dollar and renewed current account imbalances, a Plaza Accord 2.0 has been mooted. Does a new Plaza Accord lie ahead for the world?

The Plaza Accord of September 22, 1985, required a lot of trust, as all multilateral agreements do. Unlike supranational organizations that have the means of legal enforcement at their disposal, multilateral agreements are characterized by the fact that the signatory states cannot ultimately be forced to fulfill their obligations by legal means. The signatories therefore have to trust that all will voluntarily comply with the agreement. Moreover, citizens trust that politicians will not sacrifice their respective domestic currency on the altar of these multilateral agreements.

It is incumbent on every generation to pay its own debts as it goes. A principle which if acted on, would save one-half the wars of the world.

Thomas Jefferson

Multilateral agreements are an acknowledgment that in certain situations cooperation based on trust is the only way of preventing the world from entering a downside spiral. The Plaza Accord was designed to prevent a downside spiral akin to that of the 1930s, when beggar-thy-neighbor policies not only triggered a wave of protectionism, but did lasting damage to the (political) trust between nations. In this respect the Plaza Accord represented an example of the multilateral cooperation between nations, which had – for all its weaknesses and imperfections – become characteristic for the era after World War II and after 1989.

Regarding the events leading up to

“To be ignorant of what occurred before you were born is to remain always a child.”

Cicero

When the President does it, that means it's not illegal.

Richard Nixon

To understand the Plaza Accord, one has to look back to August 15, 1971. As readers of the *In Gold We Trust* report undoubtedly know, on this day Richard Nixon closed the gold window. This step de facto ended the Bretton Woods system, which had been created in 1944 in the New Hampshire town of the same name and was formally terminated in 1973. **The era of gold-backed currency was well and truly over; The era of flexible exchange rates had begun.**

Stability might not be everything, but everything is nothing without stability.

Steve Hanke

Even though it was rather rudimentary, the Bretton Woods system still provided a gold anchor for the global currency system. Only the US dollar could be redeemed for gold, and the right to demand payment in gold was confined exclusively to central banks. Just as in the classical gold standard, the gold anchor was supposed to provide stability to the global currency system. National currencies were pegged to the US dollar, but adjustments were possible in the event that fundamental imbalances emerged. Contrary to the classical gold standard, which was designed to prevent countries from acting unilaterally altogether – particularly in the fiscal realm, Bretton Woods provided some leeway for discretionary national policies.²¹⁰

However, the tie to gold was supposed to prevent the adoption of beggar-thy-neighbor policies, in other words a devaluation race similar to the one that had proven to be so devastating in the interwar period. In the short term,

²¹⁰ See Bordo, Michael: “The Bretton Woods International Monetary System: A Historical Overview”, *NBER Working Paper*, No. 4033, March 1992

a country can boost its export industries through devaluation and paper over internal structural problems, as a devaluation makes its goods cheaper in the global market. If the countries that lose export market share decide to devalue their currencies as well, a downward spiral threatens.²¹¹ The economic costs often include a significant increase in price inflation. Moreover, devaluation poisons international relations, as structural problems are no longer resolved by internal reforms, but by policies implemented to the detriment of one's neighbors.²¹²

The dollar is our currency, but it's your problem.

John Connally

Tying the currency system to the US dollar was in keeping with the new geopolitical power relations, at least in the Western world. The US had finally replaced Great Britain as the leading hegemonic power, and as a result the US dollar usurped the role once played by the British pound. The global currency Bancor, a supranational alternative proposed by Keynes, failed to gain acceptance. The formal adoption of the Bretton Woods system in 1944 finally elevated the US dollar to the status of global reserve currency, but at the same time it created various systemic problems. We have discussed these in detail in the 2017 *In Gold We Trust* report. One of them is the problem known as the Triffin dilemma.²¹³

A currency, to be perfect, should be absolutely invariable in value.

David Ricardo

In March 1973 the new monetary era of flexible exchange rates began, the intellectual foundation of which was provided primarily by the work of the so-called Chicago Boys. The most prominent representative of the Chicago School was Milton Friedman. Without a gold anchor, the exchange rate of every currency pair was supposed to be driven exclusively by supply and demand. According to this paradigm, currencies would devalue when the supply was expanded too much relative to demand, while currencies would appreciate when the supply was expanded only restrictively relative to demand. National central banks – and indirectly governments as well – were at liberty to make their own decisions, free of the tight restrictions imposed by a gold standard, but they had to bear the costs of their decisions in the form of the devaluation or appreciation of their currencies. While a gold-backed currency aims to impose discipline on nations, a system of flexible exchange rates enables national idiosyncrasies to be preserved, with the exchange rate serving as a balancing mechanism. **Milton Friedman offered an interesting comparison between the discussion over a flexible exchange rate and the discussion over daylight savings time:**

“The argument for a flexible exchange rate is, strange to say, very nearly identical with the argument for daylight savings time. Isn't it absurd to change the clock in summer when exactly the same result could be achieved by having each individual change his habits? All that is required is that everyone decide to come to his office an hour earlier, have lunch an hour earlier, etc. But obviously it is much simpler to change the clock that guides all than to have each individual separately change his pattern of reaction to the clock, even though all want to do so. The situation is exactly the same in

²¹¹ For a detailed description see Rickards, Jim: *Currency Wars: The Making of the Next Global Crisis*. 2012

²¹² Should the countries with appreciating currencies come to terms with the situation, as e.g. the hard-currency countries which pegged their currencies to the Deutschmark later did, there is no danger of an economic or political escalation.

²¹³ “Global imbalances: the root of unequal trade flows”, *In Gold We Trust* report 2017

the exchange market. It is far simpler to allow one price to change, namely, the price of foreign exchange, than to rely upon changes in the multitude of prices that together constitute the internal price structure.”²¹⁴

However, unlike any other currency system, the system of free-floating currencies invites governments and central banks to manipulate exchange rates practically at will. Without reciprocal agreements, which can provide planning security to export-oriented companies in particular, the danger of international chaos is very high, as the system of flexible exchange rates lacks an external anchor.

No major institution in the US has so poor a record of performance over so long a period as the Federal Reserve, yet so high a public reputation.
Milton Friedman

In order to prevent this chaos, a repetition of the traumatic devaluation spiral of the 1930s, and the resulting disintegration of the global economy, IMF member nations agreed in 1976 at a meeting in Kingston, Jamaica, that *“the exchange rate should be economically justified. Countries should avoid manipulating exchange rates in order to avoid the need to regulate the balance of payments or gain an unfair competitive advantage.”²¹⁵* **And in this multilateral spirit – albeit under an US initiative that was strongly tinged by self-interest – an agreement was struck nine years later that has entered the economic history books as the Plaza Accord.**

In our discussion of the so-called Plaza Accord of 22 September 1985 and the Louvre Accord adopted on 22 February 1987, we want to examine the question whether a similar agreement is conceivable nowadays and, if so, whether one should expect effects similar to those experienced in the second half of the 1980s. To this end we will first trace the most important macroeconomic data in the run-up to both accords, and then take a close look at the details of the accords and examine their impact.

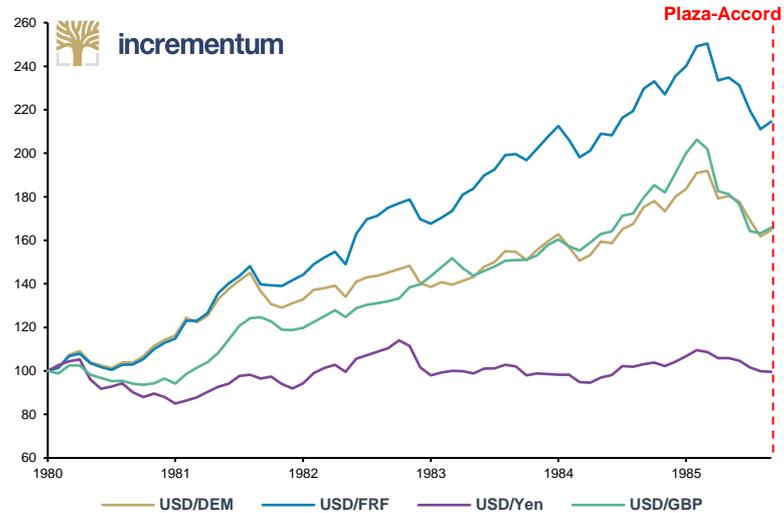
Macroeconomic excesses in the 1980s?

In the first half of the 1980s the US dollar appreciated significantly against the most important currencies. In five years the dollar rose by around 150% against the French franc, almost 100% against the Deutschmark, and intermittently 34.2% against the yen (from the January 1981 low).

²¹⁴ Friedman, Milton: “The Case for Flexible Exchange Rates”, in: *Essays in Positive Economics*, 1953, p. 173

²¹⁵ “The Specificity of the Jamaica Monetary System”, ebrary.net; see also article IV (iii) of the “Articles of Agreement of the International Monetary Fund”

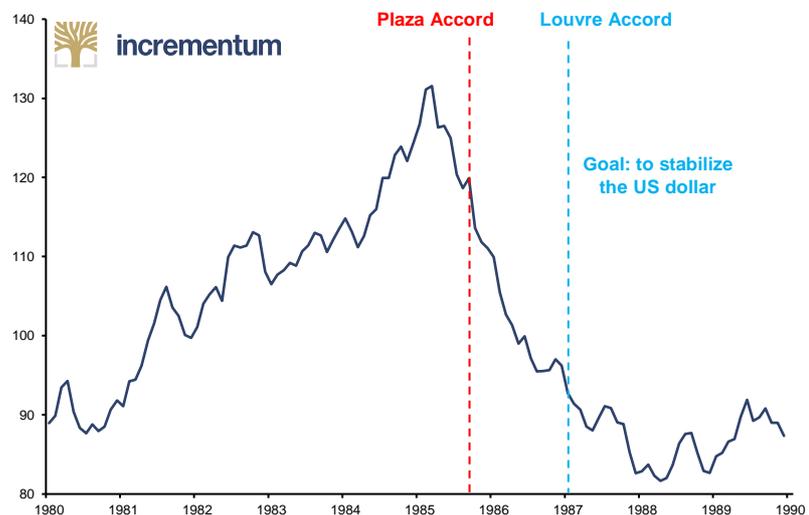
USD exchange rate vs. DEM, FRF, JPY, GBP, 01/01/1980=100, 01/1980–09/1985



Source: fxtop.com, Incrementum AG

The significant appreciation of the US dollar was of course reflected in the US Dollar Index, which consists of the currencies of the most important US trading partners, weighted according to their share of trade with the US. The following chart, moreover, shows exchange rates in real terms – i.e., it takes price levels into account, which can vary substantially in some cases.

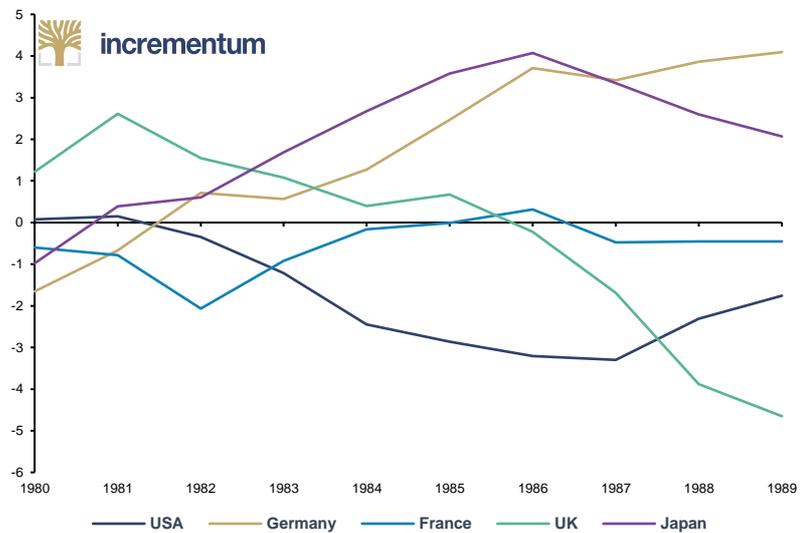
Real trade-weighted US Dollar Index, 03/1973=100, 01/1980–12/1989



Source: Federal Reserve St. Louis, Incrementum AG

From an interim low of 87.7 in July 1980, the index rose by about 50% to 131.6 by March 1985. **Not surprisingly, the US current account balance deteriorated significantly in the first half of the 1980s as a result of this substantial dollar rally, as the following chart shows.**

Current account balance, US, Germany, France, United Kingdom, Japan, in % of GDP, 1980–1989



Source: World Bank, Quandl, Incrementum AG

In 1980 and 1981 the US still posted a moderate surplus, but by 1985 this surplus had turned into a deficit of 2.9%. The trend in Germany and Japan was almost a perfect mirror image. While the two export nations had current account deficits of 1.7% and 1.0% in 1980, their current account balances turned positive in 1981 and 1982, respectively. In 1985, they already posted surpluses of 2.5% and 3.6%. Germany’s current account surplus in particular grew even further in subsequent years.

The appreciating US dollar triggered severe turmoil, particularly in Central and South America, as almost all Latin American countries had accumulated excessive amounts of dollar-denominated debt in the 1970s. In just a few years, foreign debt denominated in US dollars had more than quadrupled from USD 75bn (1975) to more than USD 315bn (1983). The large rise in interest rates and the appreciation of the US dollar increased debt service to such an extent that sovereign defaults were triggered in Mexico, Argentina, Brazil, and Chile. These defaults entered economic history under the moniker “Latin American debt crisis”.

The Plaza Accord

“History shows it is not possible to insulate yourself from the consequences of others holding money that is harder than yours.”

Saifedean Ammous

Although the Reagan administration announced shortly after taking office in 1981 that intervention in foreign exchange markets would be restricted to exceptional cases, by the beginning of Reagan’s second term in 1985 the above-mentioned imbalances had simply become too large. **At that point the governments of the leading industrial nations began to regard concerted intervention in foreign exchange markets as unavoidable.**

Never let the other fellow set the agenda.

James Baker

Representatives of the US, Germany, Japan, France, and Great Britain, a.k.a. the G5 countries, met in September 1985 at the Plaza Hotel in New York under the leadership of US Treasury Secretary James Baker in order to coordinate their economic policies. Their declared aim was to reduce the US current account deficit, which they planned to accomplish by weakening the overvalued US dollar. Moreover, the US urged Germany and Japan to strengthen domestic demand by expanding their budget deficits, which was supposed to give US exports a shot in the arm.

Ministers of Finance of the G5



From left to the right: Gerard Stoltenberg (DE), Pierre Bérégovoy (FR), James A. Baker III (USA), Nigel Lawson (GB), Noboru Takeshita (JP). Source: [Wikipedia](#)

What was agreed upon at the plush hotel on Fifth Street on 22 September 1985? The key passage is fairly dry fare and contains few specifics:

“The Ministers and Governors agreed that exchange rates should play a role in adjusting external imbalances. In order to do this, exchange rates should better reflect fundamental economic conditions than has been the case. They believed that agreed policy actions must be implemented and reinforced to improve the fundamentals further, and that, in view of the present and prospective changes in fundamentals, some further orderly appreciation of

the main non-dollar currencies against the dollar is desirable. They stand ready to cooperate more closely to encourage this when to do so would be helpful.”²¹⁶

The five signatory nations, the US, France, Germany, Great Britain, and Japan, represented by their finance ministers and central bank governors, agreed in the Plaza Accord to cooperate more closely when cooperation made sense. The criterion cited for adopting a joint approach was “deviation from fundamental economic conditions”. Interventions in the foreign exchange market were to be conducted with the aim of combating current account imbalances. In the short term the target was a 10%–12% devaluation of the US dollar relative to its level of September 1985.

Just because you do not take an interest in politics doesn't mean politics won't take an interest in you.

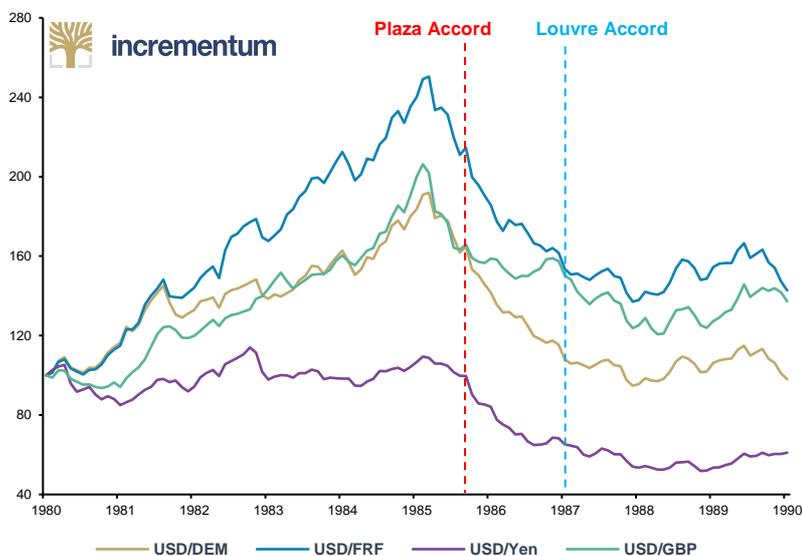
Pericles

The Federal Reserve was slated to play an important role as well. After the two periods of high inflation in 1973–1975 and 1978–1981, the Federal Reserve under Paul Volcker had brought inflation under control by sharply hiking interest rates. After another series of rate hikes into double-digit territory in the summer of 1984, the specter of inflation was finally banished, and a looser monetary policy became feasible again. By cutting the federal funds rate repeatedly and lowering minimum reserve requirements, the Federal Reserve was able to contribute to the depreciation of the US dollar. Later it would be criticized for this easing of monetary policy because it fostered the formation of the stock market bubble which ultimately culminated in the crash of 19 October 1987 (“Black Monday”).

The immediate outcome of the agreement was as desired. One week after the Plaza Accord had been signed, the Japanese yen gained 11.8% against the US dollar, while the German mark and the French franc gained 7.8% each, and the British pound 2.8%. However, the speed of the adjustment in foreign exchange markets continued to be the same as before the Plaza agreement, as the following chart clearly shows.

²¹⁶ Announcement of the Ministers of Finance and Central Bank Governors of France, Germany, Japan, the United Kingdom, and the United States, September 22, 1985

USD exchange rate vs. DEM, FRF, JPY, GBP, 01/01/1980=100, 01/1980–09/1985



Source: fxtop.com, Incrementum AG

Current account balances responded at least partly as planned. The Japanese surplus peaked in 1986 at 4.1%, but the German surplus weakened only in 1987 and thereafter began to rise again. The US current account deficit reached its worst level of 3.3% of GDP in 1987 and two years later had contracted to 1.8%. Initially the imbalances worsened because there is usually a lag of two years before a depreciating currency impacts export prices.

It's not so unusual to run out of someone else's currency.

Jeffrey Sachs

Japan paid a hefty price for the concessions it had made on the international level. The decline in export momentum affected GDP growth immediately. Japan countered the looming recession with rate cuts and fiscal stimulus measures, which led to an explosive increase in the prices of stocks and real estate, until the bubble finally began to burst as 1989 ended and 1990 began.

However, the charts also show quite clearly that the depreciation of the US dollar had already begun several months *before* the official agreement was concluded in the heart of Manhattan. The Dollar Index had reached its peak in March of 1985, i.e., half a year before the Plaza Accord. Two months earlier, on January 17, 1985, the five leading industrialized nations and later signatories of the Plaza Accord already announced on occasion of a meeting in Tokyo:

“In light of recent developments in foreign exchange markets, reaffirmed their commitment made at the Williamsburg Summit [May 1983, ed] to undertake coordinated intervention in the markets as necessary.”²¹⁷

The five signatories had in essence already agreed in early 1985 on what was to be formally decided nine months later.

²¹⁷ Announcement by G-5 Ministers and Governors, January 17, 1985

If one looks at the moves in exchange rates, it becomes evident that public discussions have at least as much influence on the public in general and the financial markets in particular as the formal adoption of a more or less binding international agreement. The decisive factor is the confidence market participants place in policymakers and their promises. As both oral and written multilateral agreements are scarcely legally enforceable, compliance with them depends all the more on the willingness of sovereign nations to abide by them.

The Louvre Accord

“As far as I know, the Plaza Accord has neither led to changes in fiscal policy, nor in trade or structural policy.”²¹⁸

Paul Volcker

In 1987 the excessive depreciation of the US dollar once again prodded the group of the five economically strongest nations into action. A further agreement was to prevent the too strongly depreciating dollar from losing even more ground. In other words, because the first coordinated intervention had failed, another intervention was mooted and **was ultimately adopted in Paris on February 22, 1987. The central aim of the so-called Louvre Accord was the stabilization of exchange rates:**

“The Ministers and Governors agreed that the substantial exchange rate changes since the Plaza Agreement will increasingly contribute to reducing external imbalances and have now brought their currencies within ranges broadly consistent with underlying economic fundamentals, given the policy commitments summarized in this statement. Further substantial exchange rate shifts among their currencies could damage growth and adjustment prospects in their countries. In current circumstances, therefore, they agreed to cooperate closely to foster stability of exchange rates around current levels.”²¹⁹

The most imposing dictate of power can never effect anything in contradiction to the economic laws of value, price, and distribution; it must always be in conformity with these; it cannot invalidate them; it can merely confirm and fulfill them.

Eugen von Böhm-Bawerk

In a never-published additional protocol, target ranges of +/-5% were allegedly agreed upon for individual currency pairs. It was decided to keep this agreement secret in order to prevent speculative attacks on the currencies concerned. In addition, the signatory states agreed on fiscal, trade, and monetary policy adjustments to stabilize exchange rates within the agreed ranges. A year later, the yen had appreciated by a further 17% against the US dollar, the British pound by 15.5%, the Deutsche mark by a little less than 10% and the French franc by 8.5%.

²¹⁸ Eichengreen, Barry: “The Plaza and Louvre Accords are not suitable models for today’s currency policy – actions rather than words”, (our translation); “Plaza- und Louvre-Abkommen eignen sich nicht als Vorbild für heutige Währungspolitik – Taten statt Worte”, *Finanz und Wirtschaft*, January 19, 2005

²¹⁹ [Statement of the G6 Finance Ministers and Central Bank Governors](#), February 22, 1987

Exchange rates and with them the global economy can only be stabilized by decisively adjusting monetary and fiscal policies.

Barry Eichengreen

Thus, the Louvre accord did not even come close to achieving the desired stabilization of exchange rates.

This outcome was also due to the fact that the differences of opinion between the US and the other G6 nations regarding the causes of the US current account deficit were simply too great. While the US believed that the strong US dollar was the main reason, the other five countries regarded the US budget deficit as the main reason.

As is true of any multilateral agreement, neither the Plaza Accord nor the Louvre Accord could be legally enforced.

The wording in each case was for the most part so vague that it left considerable room for interpretation, and there was no supranational authority that could have enforced compliance. As a result, both accords were subject to political wrangling and could – depending on political power and diplomatic skill – be either complied with or not, at will.

And because exchange rates – at least in the medium to long term – are mainly determined by fundamentals, exchange rates can change substantially only if underlying macroeconomic conditions (real interest rate differentials, trade and current account balances, the investment climate, and budget balances) change.

Regardless of how powerful a government or how watertight an international agreement is, those who enter an agreement cannot get past this fact.

Plaza Accord 2.0?

“Why? Because a reset – both in markets and in politics – is coming whether we like it or not. We can either prepare for the reset ... we can shape the reset as best we can ... or we can let the reset shape us.”

Ben Hunt

It’s very, very hard to compete when you have a strong dollar and other countries are devaluating their currency.

Donald Trump

Some people propose the creation of a new version of the Plaza Accord, i.e., a multilateral agreement that includes, *inter alia*, coordinated intervention in foreign exchange markets. The proponents of a Plaza Accord 2.0 point to the appreciation of the US dollar by almost 40% (particularly in the years 2011–2016), and to the large differences between the current account balances of the leading developed countries. However, such an agreement would represent a new turning point in international currency policy. After all, in 2013 the G8 agreed to refrain from foreign exchange interventions – in a kind of Anti-Plaza Accord (Jeffrey Frankel).

The following chart illustrates the significant appreciation of the US dollar in recent years and shows that the strongest upward move in the dollar in the current decade occurred in 2015.

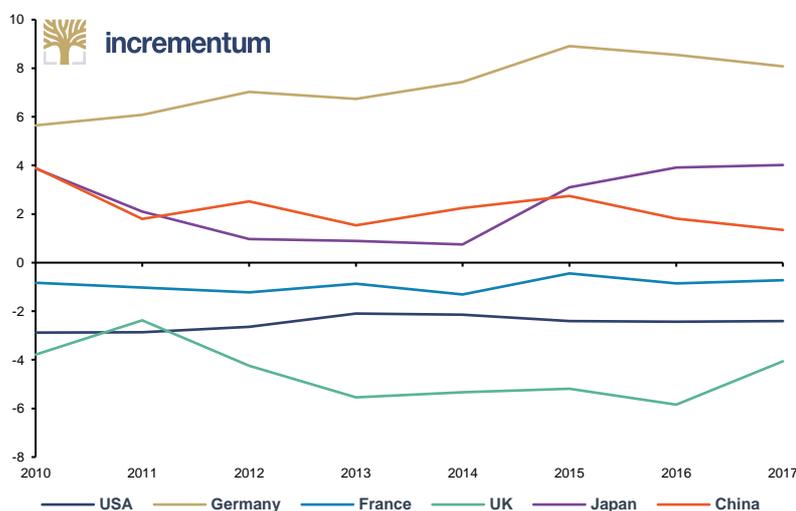
Real trade-weighted US Dollar Index, 03/1973 = 100, 01/2011–04/2019



Source: Federal Reserve St. Louis, Incrementum AG

And just as was the case thirty years ago, the US has a significant and persistent current account deficit, while Germany, Japan – and these days also China – have significant surpluses. Germany’s surplus, which intermittently reached almost 9%, is particularly striking.

Current account balances of US, Germany, France, Great Britain, Japan, China, in % of GDP, 2010–2017



Source: World Bank, Quandl, Incrementum AG

Boy, am I good at solving debt problems? Nobody can solve it like me.

Donald Trump

Long before Donald Trump weighed in on the issue, the US Treasury – which is in charge of the US dollar’s external value – repeatedly stressed that the dollar was too strong, especially compared to the renminbi. Time and again the US accused China, Japan, and the eurozone of keeping their currencies at artificially low levels

Because things are the way they are, things will not stay the way they are.

Berthold Brecht

in order to support their export industries.²²⁰ The fact that Donald Trump used the term *manipulation*²²¹ in a tweet came as a bit of a surprise, as the US has not used this term officially since 1994. It is doubtful though whether Trump really wanted to provoke an escalation. After all, the current US President is not necessarily known for being *au fait* with the subtle nuances of diplomat speak.

The euro, the yen, and the renminbi are clearly undervalued against the US dollar if one uses the Big Mac Index²²² in order to calculate the required real exchange rate adjustments. Thus the renminbi is undervalued by about 45%, the yen by 35.5% and the euro by almost 17% (as of January 2019²²³), although it should be kept in mind that there are considerable differences within the eurozone as well.

In any case, such a significant adjustment in exchange rates would have to be implemented gradually; the risk of creating further distortions would be too great. An abrupt adjustment of rates might result in, for example, a significant increase in the pace of US inflation and/or a collapse of the export sectors of countries whose currencies would appreciate.

- Closely along the lines of the Plaza Accord blueprint, the US could conclude a multilateral agreement with the EU, China, and Japan that would encourage those countries to revalue their currencies and reduce their excessive current account surpluses with additional measures, such as stimulating domestic demand through public investment and strong wage increases.²²⁴ However, such a multilateral solution appears highly unlikely – particularly in view of the increasingly muddled geopolitical situation. Moreover, it is also unlikely on account of Germany’s being a member of the EU and especially of the eurozone, which is placing considerable limits on its decision-making capacity.
- It is even less likely that an agreement will be reached by the G20, *and* that such an agreement, if reached, will be complied with and achieve the desired effects.
- The US could strike bilateral deals: Talks with China are currently getting tougher, with the aim of encouraging China to increase imports from the US. In the recent past the exchange rate no longer appeared to be a major issue; but prior to that, the US frequently denounced in harsh terms the alleged artificial undervaluation of the renminbi to promote Chinese exports. It is to be expected that the exchange rate issue will be revisited. Negotiations with the EU are currently stalling, in part because the EU – primarily on account of French pressure – is refusing to negotiate about opening its internal market to US agricultural products.

²²⁰ See “U.S. tensions rise over China’s currency policy”, CNN, October 7, 2011; “U.S. declines to name China currency manipulator”, *Reuters*, November 27, 2012

²²¹ Trump, Donald: [Tweet](#), July 20, 2018

²²² Wikipedia: [Big Mac Index](#)

²²³ The data is retrieved from [here](#).

²²⁴ The current euro area account surplus of 3.2% of GDP (2017) is significantly higher than that of the EU (1.3%, 2017). This is primarily attributable to United Kingdom’s large trade deficit of 3.9% (2017). With the impending exit of Great Britain from the EU, the difference between the surpluses of the euro area and the EU-27 will therefore decrease significantly.

- Unilateral US intervention in the foreign exchange market is unlikely due to its limited impact. Frequent jawboning to push the dollar lower in the short-term cannot be ruled out, but this strategy cannot solve any fundamental and structural problems. Interest rate cuts as a direct instrument of trade policy are unthinkable but cannot be ruled out as an indirect instrument of trade policy to support a weakening (export) economy in a worst-case scenario.
- In any case, even in the context of a concerted effort, it would be open to question whether the financing volumes required for effective interventions could actually be raised. Since the Plaza Accord was struck in 1985, global foreign exchange trading volume has increased 10-fold to more than USD 5trn daily.
- A devaluation of the US dollar and a concomitant appreciation of euro, yen, and renminbi would provide a tailwind to US exports, hamper those of the other countries, and accordingly lead to an adjustment in trade and current account balances. Inflationary pressures would increase in the US and would be mitigated in the other countries. However, a decrease in price pressures would essentially be the very last thing on the wish lists of the ECB and the BoJ, as it would complicate monetary policy in their currency areas even further.
- A dollar devaluation would be a blessing for a world burdened with USD-denominated debt. Debt service costs in local currency terms would decrease, providing relief to the countries concerned. China, which carries a large USD-denominated debt, would be a beneficiary as well, unless an escalation in the trade war with the US were to substantially lower the proceeds from its exports to the US.
- However, bilateral or unilateral efforts would clearly contradict the spirit of the Plaza and Louvre Accords, which were decidedly multilateral agreements.
- QT and the widening interest rate differential between the US vs. the euro area and Japan are fundamental macroeconomic developments suggesting a further strengthening of the US dollar. Moreover, during the crises in Turkey and Argentina last year, the US dollar confirmed its status as a safe haven and thus its dominant position among fiat currencies.
- Lastly, as long as the US dollar functions as the global reserve and senior currency, a US current account deficit is almost inevitable, as the so-called Triffin dilemma (named after economist Robert Triffin) shows. In order to provide dollar liquidity to the world, a current account deficit is unavoidable, unless the US is prepared to accept a significant appreciation in the US dollar. However, a significant dollar appreciation is precisely what the US wants to prevent.

Conclusion

“Dwell on the past, lose an eye. Forget the past, lose both eyes.”

Old Russian proverb

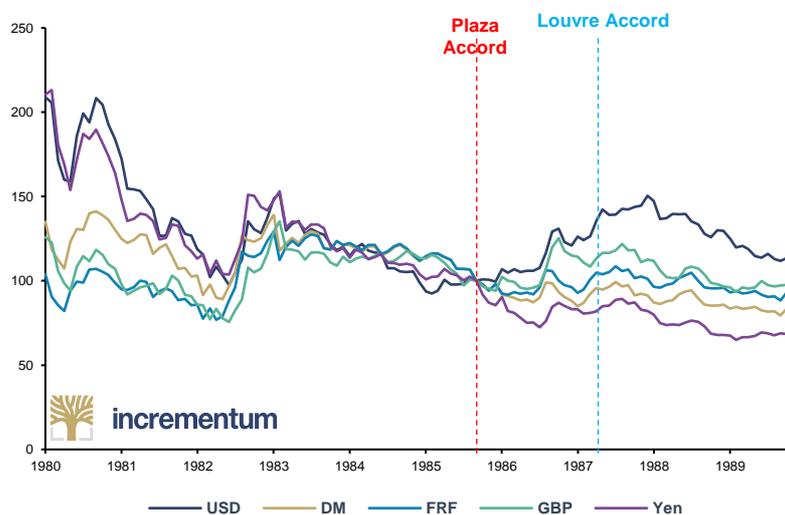
In markets, economics, and crises; things take longer to happen than you think they will, and then they happen faster than you thought they could.

Ritesh Jain

James Baker, who served as Secretary of the Treasury in the second Reagan administration, led the Plaza and Louvre Accord negotiations on behalf of the US. He wanted, at all costs, to prevent the world from entering a devaluation and protectionism spiral similar to the one that beset the country in the 1930s, which could have pushed the world headlong into disaster. Cooperation with other countries was therefore very important to him. As important as the cooperation may have been from a political perspective, the economic consequences were quite modest – partly because political efforts cannot overcome economic fundamentals, at least in the medium to long term, and partly because the political agreements were concluded only after exchange rates had already moved in the desired direction for some time.

What were the effects of these exchange rate movements and the agreements on the gold price in terms of the currencies involved? That date is shown in the following chart, which is indexed to 100 as of September 1985, i.e., the month the Plaza Accord was signed.

Gold price in USD, DM, FRF, GBP, JPY, 09/1985=100, 01/1980–12/1989



Source: World Gold Council, fxtop.com, Incrementum AG

Overall, the 1980s were not a particularly propitious decade for gold, as prices had reached levels that were simply too high after the two rallies of the inflationary 1970s. Moreover, real interest rates in the 1980s and 1990s were mostly positive, resulting in a challenging environment for gold because of high opportunity costs. Gold had, moreover, attained a record high in USD terms on 21 January 1980 that it would not regain before 2007. A closer look, nevertheless, reveals a number of noteworthy twists and turns.

After the Plaza Accord in 1985, gold managed a trend reversal in USD terms, and in the wake of the Louvre Accord the new uptrend continued until the end of 1987. Gold once again confirmed its status as the antagonist of the US dollar. The gold price declined in the years in which the US dollar appreciated strongly; and with the devaluation of the dollar, gold prices turned back up again.

People can foresee the future only when it coincides with their own wishes, and the most grossly obvious facts can be ignored when they are unwelcome.

George Orwell

The trend looked different in the remaining currencies. The downtrend in gold prices that had begun after the record high that followed the second oil price shock was only briefly interrupted in the second half of 1986 and immediately after the Louvre Accord and again during the stock market turmoil in the autumn of 1987. After the US dollar reached its low in early 1988 – which was not undercut again before the summer of 2007 – the gold price moved more or less in sync over the rest of the decade in terms of the currencies depicted on the chart above.



FRA 1XMA
OTCQB XXMMF
TSXv XIM

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CANADA

PRIMARY ASSETS

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*KENVILLE GOLD MINE



OPTION PARTNERS

*TREASURE MOUNTAIN SILVER PROJECT



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Acceleration and the Monetary Order

The Transformation of the Monetary System in the Modern Era

“Daily life has become a sea of drowning demands, and there is no shore in sight.”

Kenneth Gergen

Key Takeaways

- The socioeconomic upheaval of late modernity is driven by the acceleration principle.
- The evolution of the monetary system can be understood as analogous to other developments in (late) modernity.
- The monetary system itself is a major, if not the main driver of acceleration.

Introduction

“We are drowning in information, while starving for wisdom. The world henceforth will be run by synthesizers, people able to put together the right information at the right time, think critically about it, and make important choices wisely.”

E.O. Wilson

Anyone who believes exponential growth can go on forever in a finite world is either a madman or an economist.

Kenneth E. Boulding

Generating ideas is not a problem. Incubation is. Acceleration is.

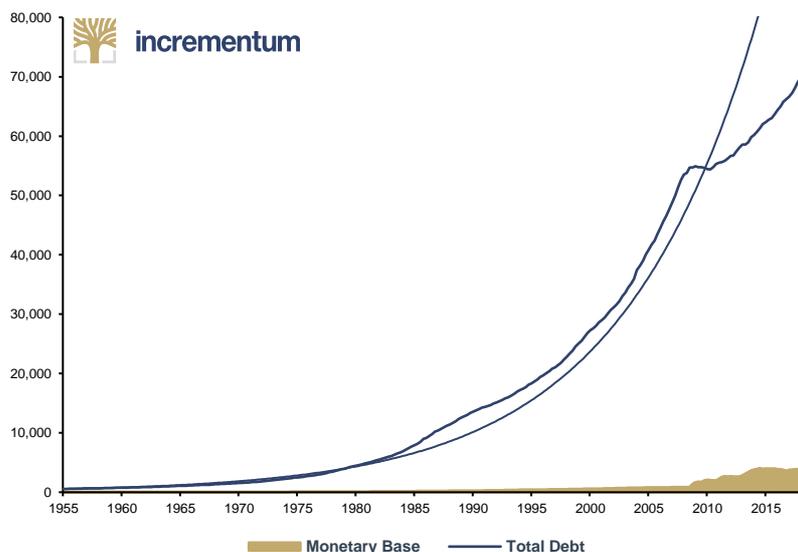
Rita Gunther McGrath

Since 2007, we have been writing our annual *In Gold We Trust* report. It might as well be called the *In Fiat Money We Don't Trust* report, because the very feature that makes gold a good store of value and/or an excellent form of money in our view, namely its inelastic supply, is precisely what government-issued currencies lack: Their supply grows through uncovered (and from the perspective of most representatives of the Austrian School, fraudulent), excessive expansion. When widespread credit defaults occur in the course of a crisis, the money supply is liable to contract as well, making recessions far more painful. Most economic and financial crises are simply an integral feature of boom-bust cycles induced by the supply elasticity of state-issued currencies.

Since the Greenspan era, central banks have been trying to counter boom-bust cycles by means of proactive monetary policy. In essence, every time the economy threatens to slide into recession, i.e., to enter a bust phase, central banks inject – de facto, irreversibly – new money into the economy.

In graphic form the result is best illustrated by the following chart, which we have repeatedly shown: **Total credit-market debt has expanded exponentially since the US dollar's tie to gold was cut in 1971**, while the Federal Reserve's monetary base has increased almost five-fold since 2008. One question practically leaps from the page when we look at this chart: **Is this sustainable? As is well known, we are quite skeptical about that.**

Total US credit market debt and the US monetary base, in USD bn, 1955-2018



Source: Federal Reserve St. Louis, Incrementum AG

*For without risk there is no faith,
and the greater the risk, the
greater the faith.*

Søren Kierkegaard

Is the exponential increase in credit expansion an isolated case of insanity? Or can it be placed into a broader context of the socio-cultural trends shaping an era? It is easy to find numerous other phenomena whose trends have been exponential:

- **Growth of the global population in the past three centuries:** Since the 17th century, the global population has repeatedly doubled in ever shorter time periods.
- **Increase in the speed of travel:** from around 15km/h on horseback to several thousand km/h in a spaceship²²⁵
- **Increase in the amount of data created by human beings:** until 2005 130 exabytes,²²⁶ by 2010 1,200 exabytes, by 2015 7,900 exabytes, and by 2020 an estimated 40,900 exabytes
- **Increase in the speed of communication:** Both the speed of information transfer and the amount of transferred information have grown explosively.²²⁷
- **Faster production of goods,** thanks to technologies like the steam engine, hydraulics, the combustion engine, electrical engineering, the conveyor belt, and micro-technology
- **Higher speed of distribution and consumption:** Higher (real) incomes, resulting from higher productivity and declining goods prices driven by globalization, have gone hand in hand with rising consumer demand and shorter product life cycles.

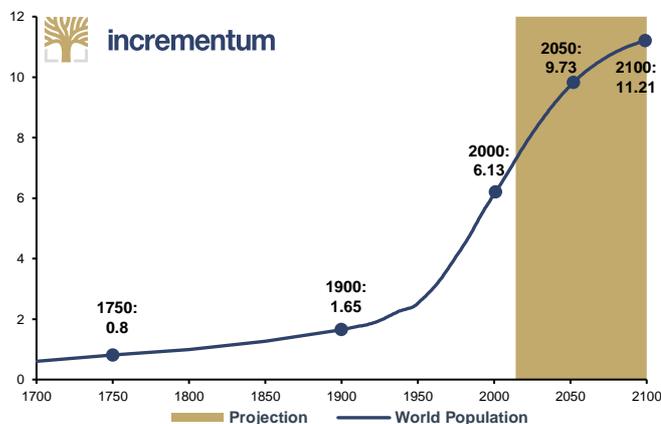
²²⁵ The increase in the speed of travel has strong effects on the perception of space, which depends significantly on the amount of time required to traverse space. The result is an experience or a phenomenon which Hartmut Rosa refers to as the "shrinking of space" and David Harvey characterizes as "the destruction of space by time". According to Rosa, "It appears as though the world has shrunk to approximately one sixtieth of its original size since the Industrial Revolution." Rosa, Hartmut: Beschleunigung: Die Veränderung der Zeitstrukturen in der Moderne (Social Acceleration: A New Theory of Modernity), Suhrkamp Verlag Frankfurt am Main, 11th edition, 2005, p. 125ff; henceforth: Rosa (2005)]

²²⁶ One exabyte equals one quintillion (10¹⁸) bytes, one billion gigabytes, or one thousand petabytes.

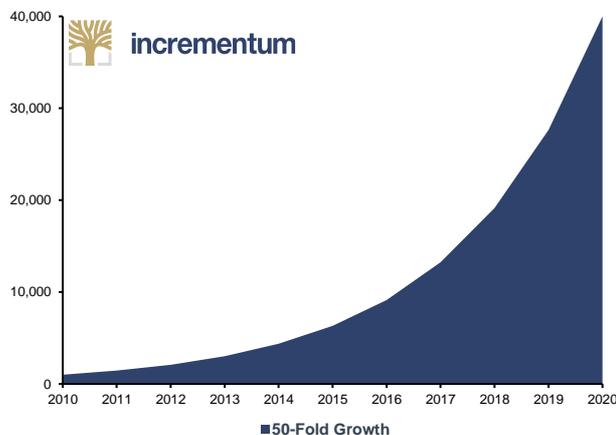
²²⁷ It has been calculated that the speed of communication has increased by a factor of 10⁷ in the 20th century or by a factor of 10¹⁰ in the 19th and 20th centuries together. See Geißler, Karlheinz: Vom Tempo der Welt. Am Ende der Uhrzeit. ("On the Velocity of the World. At the End of Time"). Freiburg: Herder, 1999, p. 89; Heylighen, Francis: "Technological Acceleration", 2001, p. 2ff

- Explosive growth in technical possibilities, consumption options, and consequently in available fields of study, occupations, etc.

Global population, in bn, 1750–2050



Trend in amount of data created by people, in exabytes, 2010-2020



Source: Ourworldindata, resp. IDC's Digital Universe Study (EMC, December 2012), Incrementum AG

Acceleration is finite, I think, according to some laws of physics.

Terry Riley

There is a connection among all the trends listed above. They are phenomena of the epoch known as “modernity”. **According to an analysis by sociologist Hartmut Rosa of Jena, the underlying principle of modernity is the “acceleration in material, social and spiritual conditions”, whereby he regards acceleration as the increase in quantity²²⁸ per unit of time.²²⁹** In this section we want discuss the evolution of the modern monetary system in the context of Rosa’s theory and particularly of his thesis regarding “Acceleration: the changing time structures of modernity”.²³⁰

²²⁸ According to Rosa, things that can function as quantities in this context include “distance traveled, the number of communicated characters, goods produced [technological acceleration], but also the number of occupations per working life or intimate partner changes per year [accelerated social change] as well as action episodes per unit of time [acceleration in the pace of life].” Rosa (2005), p. 115

²²⁹ See Rosa, Hartmut: Resonanz: Eine Soziologie der Weltbeziehung (Resonance - A Sociology of the Relationship to the World. Suhrkamp Verlag, 2016, p.673. In academic literature the process of modernization is generally tied to four phenomena: structural differentiation (social division of labor, etc.), rationalization, individualization, and the domestication of nature. Noted sociologists such as Karl Marx, Max Weber, and Émile Durkheim considered modernization from one or more of these perspectives. Rosa demonstrates that acceleration is the underlying principle upon which all four dimensions rest.

²³⁰ See Rosa (2005)

Acceleration as the Major Underlying Principle of Modernity

“The whole of the West no longer possesses the instincts out of which institutions grow, out of which a future grows: Perhaps nothing antagonizes its ‘modern spirit’ so much.

One lives for the day, one lives very fast, one lives very irresponsibly: Precisely this is called “freedom.” That which makes an institution an institution is despised, hated, repudiated.”

Friedrich Nietzsche

Below we briefly present Rosa’s theory of acceleration. He differentiates between three areas of acceleration:

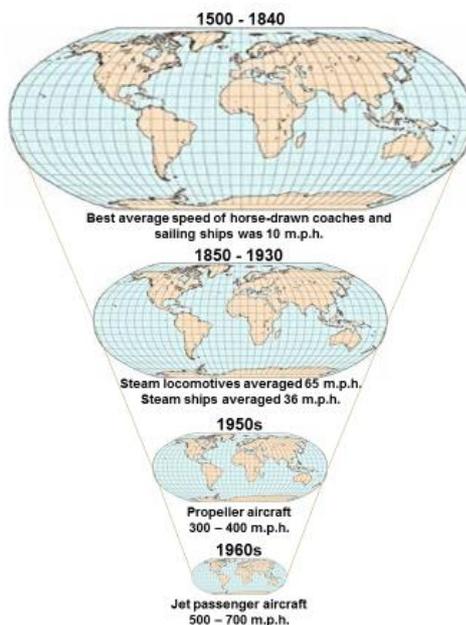
- technical acceleration
- acceleration of social change
- acceleration of the pace of life

The three areas of acceleration

Most obvious to everyone are manifestations of **technical acceleration** that are revolutionizing everyday life, particularly in transportation (e.g. railways, cars, airplanes), production (e.g. the steam engine, conveyor belts, computers), and communication (e.g. email, smart phones, social media).

They have fundamentally changed how people relate to time and space. Thus the acceleration in transportation has led to a perception of “shrinking space”: Today it takes not even two hours to travel from Vienna to Paris by airplane, while in the not-too-distant past the Austrian emperor would have barely made it to his countryside residence near Vienna in this time span. According to David Harvey, space has shrunk to 1/60th of its former size since the 18th century. (See the illustration below.) With the spread of the internet and digitalization, the importance of space continues to decrease.

“Space shrinkage” through the acceleration in transportation



Source: Harvey, David: *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Cambridge, Massachusetts/Oxford: Blackwell, 1990, S.241

We run as fast as we can in order to stay in the same place.

Peter Conrad

The second area of acceleration identified by Rosa is the **acceleration of social change**. In line with the ideas of philosopher Hermann Lübbe, the *present* can be understood as a period of stability, in the sense that experiences gained within this time period can guide action in the present and the future. The acceleration of social change means that the present shrinks: The half-life of the experiences and knowledge one acquires becomes ever shorter. Consider, for example, the role senior citizens play in society today. While they were once regarded as “wise persons”, rich with important knowledge and a wealth of experience, they are today seen as pitiable, as the bulk of their knowledge is deemed obsolete, i.e., they are no longer in lockstep with the times. **In short, the conditions of social context, action, and decision-making are increasingly unstable. People must constantly revise their expectations and embrace “lifelong learning” in order not to be left behind.**

“Actors operate under the condition of permanent, multi-dimensional change, which makes standing still through non-acting or non-deciding impossible. Those who don’t adjust anew over and over again to the continually changing conditions for action... lose all prerequisites for connection and options for the future.”²³¹

Since not everybody can successfully adapt to the growing pressure of being “up-to-date” and, as noted above, the importance of space is steadily decreasing, the fault lines between the winners and losers of globalization are running less and less between individual nations but rather within them. The Populist International, which we have occasionally discussed in past publications, has a powerful “mouthpiece of those left behind” in the form of Donald Trump, who holds what has traditionally been the world’s most prestigious office. His ascendance is a

²³¹ Rosa (2005), p. 190, our translation

[T]he typical commuter may confront as many different persons (in terms of views or images) in the first two hours of a day as the community-based predecessor did in a month.

Kenneth Gergen

The real problem of humanity is the following: We have paleolithic emotions, medieval institutions, and god-like technology.

E.O. Wilson

manifestation of the social upheaval whose seeds have been sown by differences in the response to social acceleration by the world's winners and losers.

The third area of acceleration examined by Rosa is the **acceleration of the pace of life**, which he defines as “**an increase in action and/or experience episodes per unit of time as a consequence of a scarcity of time resources**”.²³² This intensification impacts everyday working life as well as leisure and family time, as consumption and experience options expand, become cheaper, and are increasingly savored by the peer group that serves as one's benchmark. The following acceleration strategies are among those employed:

- **Acceleration of action** (e.g. power napping, speed reading, speed dating, seeking of quality time, increase in talking speed,²³³ shortening of sleep time²³⁴)
- **Shortening or elimination of breaks and periods of idleness** (e.g. high-frequency trading)
- **Multitasking**
- **Replacement of slower by faster action** (e.g. fast food, drive-through funerals)

What causes the acceleration?

Is technical acceleration the actual driving force behind all the other dimensions of acceleration? Or is technical acceleration the response to time becoming scarce? Both apply. For instance, the acceleration of transportation and communication started well before the invention of technological milestones such as the steam engine and the telegraph.²³⁵ And **while the direct effect of technical acceleration is often the “saving” of time, time saving often entails comprehensive changes, which in turn lead to time's becoming more scarce.**

Thus, the automobile has shortened travel times among residences, workplaces, and vacation destinations, with significant consequences for settlement structures, air quality, and the urban landscape. Modern means of communication such as email and instant messaging services like WhatsApp, Telegram, and Signal have altered social behavior expectations: Flexible availability and rapid responses are expected ever more frequently. Digitalization is not a purely technological matter, either; it also encompasses a revolution in professional structures, production methods, and communication patterns.²³⁶ As these examples show, technical acceleration in fact accelerates social change and the pace of life.

²³² Rosa (2005), p.198, our translation

²³³ Thus, Ulf Thorgersen discovered that the average number of phonemes uttered per minute in speeches on the budget in the Norwegian parliament had steadily increased between 1945 and 1995 from 584 to 863. See Erikson, Thomas Hylland: *Tyranny of the Moment: Fast and Slow Time in the Information Age*. London/Sterling, Virginia: Pluto Press, 2001, p. 71

²³⁴ “Schweizer schlafen so wenig wie noch nie” (“The Swiss are sleeping less than ever before”), according to Manfred Garhammer. He says the average duration of sleep has decreased by around 30 minutes since the 1970s and by almost two hours since the 19th century. See Garhammer, Manfred: *Wie Europäer ihre Zeit nutzen: Zeitstrukturen und Zeitkulturen im Zeichen der Globalisierung*. Berlin: Edition Sigma, 1999

²³⁵ Koselleck, Reinhart: *Zeitschichten: Studien zur Historik*. With an article by Hans-Georg Gadamer, Frankfurt am Main: Suhrkamp, 2000, p. 158f

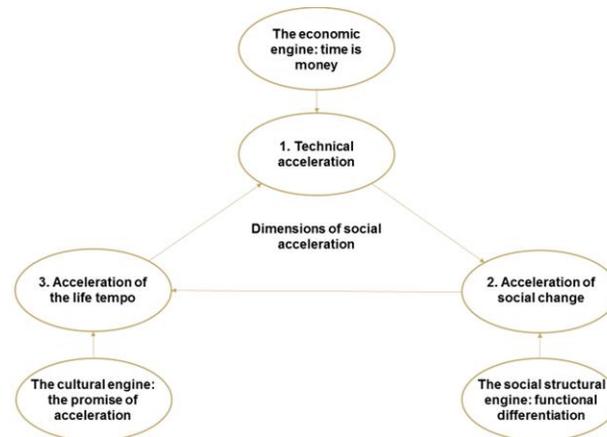
²³⁶ The technological achievement that enables international financial transactions to be conducted within seconds (including reactions to the dissemination of news in real-time), has created many new investment patterns, trading

It is bad enough... that one cannot longer learn anything for one's entire life. Our ancestors relied on the education they received in their youth; but we have to relearn every five years now, if we want to avoid becoming completely outmoded.

Johann Wolfgang v. Goethe

Accelerating social change in turn means that experiences and action orientations lose their validity ever more rapidly and social actors have to expend ever more effort on remaining up to date. "There is an expansion of the scope of the *absolutely necessary*, the (adaptive) behaviors that have to be performed, as well as of the list of what is *possible*: for social actors (and systems) time becomes scarce."²³⁷ The consequence is an increase in the pace of life. This in turn increases the demand for technological innovations that help to make more time resources available. The three areas of acceleration therefore function in a "reciprocal growth relationship", which is why Rosa presents them schematically in a "circle of acceleration":

Driving forces of acceleration



Source: Rosa (2005), S. 309

In addition to these intrinsic escalation tendencies, Rosa also identifies three external drivers:

Remember that time is money.
Benjamin Franklin

[W]hen time is money, speed becomes an absolute and unassailable imperative for business.

Barbara Adam

- **The economic driver:** In the capitalist economic order, striving for time advantages such as securing patents and ensuring time efficiency represent systemic imperatives.²³⁸
- **The cultural driver:** According to Max Weber, cultural acceleration impulses spring from the Protestant work ethic, or from the desire to savor as many of the opportunities the world has to offer as possible before one dies.
- **The structural social driver:** Functional differentiation fosters the acceleration of production and development processes but also brings about greater requirements for synchronization and boosts complexity, i.e., it accentuates the scarcity of time.

—
strategies, and speculative opportunities, which have, inter alia, increased the density of the global network (as a result of which, e.g., regional turmoil can rapidly propagate and trigger international crises).

²³⁷ Rosa (2005), p. 249, our translation

²³⁸ "The increase in productivity, which can be directly defined as an increase in the quantity of output per unit of time and thus as an acceleration, therefore creates competitive advantages." Rosa (2005), p. 259ff; our translation. Note: Among economists, especially economists in the tradition of the Austrian school of economics have researched the importance of time in the production process.

Postmodernism entices us with the siren call of liberation and creativity, but it may be an invitation to intellectual and moral suicide.

Gertrude Himmelfarb

In the classical model, administrative activity ... is an efficient time-saving instrument since it minimizes the need for time-consuming deliberation during the implementation of policy.

Max Weber

Late Modernity or Postmodernism as a Result of Further Acceleration

Many social and cultural scientists have identified an epochal caesura, which they place in the second half of the 20th century, or at the transition to the 21st century, and for which terms like *late modernity*, *postmodern era*, *reflexive modernity*, or *second modernity* are circulating. In Rosa's theory these historical diagnoses have a common focus. **According to Rosa's thesis, the major driver behind the sociocultural upheaval marking the fault line between epochs was renewed acceleration, which transformed the space-time continuum once again.**²³⁹

A peculiar quality of late modernity is that many constructs which shaped modernity are dissolving or are sometimes regaining pre-modern characteristics. Thus, the enormous accelerative processes of modernity could happen only because certain framework conditions existed, which themselves were exempt from this dynamic and therefore provided stability and planning certainty. Of particular importance in this context was the rise of the nation state, which secured numerous framework conditions that made complex planning and action possible in the first place (such as uniform national languages, currencies, time zones, and legal dispensations). The conditions also included the provision of legal and trade security as well as fairly reliable protection against external threats.

By contrast, in late modernity, there is a growing trend toward denationalization, through relinquishing political power to supranational bodies such as the UN, EU, ECB, and IMF; through institutions controlled from abroad, such as DITIB, RT, or Cambridge Analytica, which shape public opinion and thus social life; through migration; or through the transformations imposed by wars, which proceed along paths that are increasingly decoupled from national borders. An interesting aspect is that with the emergence of cryptocurrencies a counter-project against the state's money monopoly has emerged.²⁴⁰

The following table lists a number of areas that illustrate the epochal transformation that has been wrought by technical and social acceleration:

²³⁹ Rosa (2005), p. 335, our translation

²⁴⁰ For more information on crypto currencies see our quarterly [Crypto Research Report](#).

Important changes from modernity to late modernity

	Classical Modernity and also Pre-modern Era	Late Modernity
Relationship between generations	<ul style="list-style-type: none"> Pre-modern era: family structure fundamentally stable over generations; extended family, clan Classical modernity: nuclear family, with married couples at the center 	<ul style="list-style-type: none"> Family cycle reduced to intra-generational lifespan Temporary partner replaces spouse Exotic combinations, patchwork, etc.
Relationship to occupational life	<ul style="list-style-type: none"> Pre-modern era: son took up father's profession Classical modernity: taking up a lifelong, identity-establishing profession of one's own choice 	<ul style="list-style-type: none"> Multiple changes of profession/occupation Phases of unemployment or further training
Social change	<ul style="list-style-type: none"> Pre-modern era: structural and cultural conditions passed on over many generations Classical modernity: structure and culture stable over the span of one generation 	<ul style="list-style-type: none"> Fundamental change of conditions within one generation
Differentiation	<ul style="list-style-type: none"> Acceleration effect through specialization 	<ul style="list-style-type: none"> Tendency toward braking of acceleration because of too-high complexity
Relationship between working time and leisure time	<ul style="list-style-type: none"> Pre-modern era: natural rhythms such as day and night, summer and winter structured the workday Classical modernity: introduction of fixed, abstract working hours (factory siren, time clock) Spheres of work and leisure were strictly separated 	<ul style="list-style-type: none"> Declining role of a fixed regime of working hours in favor of greater flexibility (time clock is an anachronism) Spatial deregulation of work, e.g. home office Commingling of the spheres of work and leisure Decoupling of working hours from the object of work – coordination of work results via deadlines
Welfare state	<ul style="list-style-type: none"> As a "safety device", the welfare state was an enabler of acceleration. 	<ul style="list-style-type: none"> Often seen as an expensive, growth-impeding effort that negatively affects the productivity of welfare recipients
Bureaucracy	<ul style="list-style-type: none"> Praised by Max Weber as an excellent apparatus of acceleration 	<ul style="list-style-type: none"> Nowadays, the incarnation of inefficiency and an obstacle to innovation
Democracy	<ul style="list-style-type: none"> Acceleration in the succession of rulers Accelerated reaction to sociopolitical requirements 	<ul style="list-style-type: none"> Too slow as a political decision-making model
War	<ul style="list-style-type: none"> Conflict between states Use of weapons with the greatest possible destructive potential Centralized conduct of war 	<ul style="list-style-type: none"> Civil war Use of weapons with limited destructive potential Guerrilla strategies
Nation state	<ul style="list-style-type: none"> Provides stable framework conditions within which economic activity can flourish Competition among European states with respect to territorial accumulation of power has accelerating effect 	<ul style="list-style-type: none"> Seen as hampering trans- and supranational exchange processes
Monetary system	<ul style="list-style-type: none"> Emergence of standardized national currencies Rudimentary realization of a gold standard 	<ul style="list-style-type: none"> Fiat money system finally detached from gold Erosion of government currency monopolies due to the emergence of cryptocurrencies?

Source: Rosa (2005); a number of passages partly copied verbatim, particularly from p. 329

The Fiat Money System from the Perspective of Acceleration Theory

Monetary acceleration during the era of commodity-backed money systems, particularly the gold standard

Having outlined Rosa's theory, we want to combine it with our insights regarding the monetary system. Clearly the modern-day monetary system is

steeped in the principle of acceleration as well. In the early modern era, trade flourished, and transaction amounts began to rise, which made the use of coins ever more impractical. From the late 16th century onward, money warehouses (depositories, or "banks") were established, which accepted all sorts of different coins, determined their value, and issued warehouse receipts ("banknotes") which certified an owner's claim to the deposited coins. Every merchant had an account, and payments between merchants were simply made by means of entries in their accounts at the money depositories. As a result, international trade and payment transactions accelerated significantly.

Governments believe that when there is a choice between an unpopular tax and a very popular expenditure, there is a way out for them—the way toward inflation. This illustrates the problem of going away from the gold standard.

Ludwig von Mises

Money often costs too much.
Ralph Waldo Emerson

Gold is scarce. It's independent. It's not anybody's obligation. It's not anybody's liability. It's not drawn on anybody. 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

Fractional reserve banking represented an escalation in monetary acceleration. Initially the money warehouses had the idea of lending out part of the gold coins they held in custody, since as a rule not all depositors wanted to redeem their bank notes for coins concurrently. Through the granting of credit, the number of circulating banknotes or fiduciary media (per unit of time) increased, which had an immediate accelerative effect in the form of an increase in economic activity. **Philosopher and sociologist Georg Simmel postulated more than a century ago that the available money supply and its velocity of circulation were correlated with the pace of life.** In his book *Philosophy of Money* he wrote:

“If one compares the ability of land to circulate with that of money, the difference in the pace of life immediately sheds light on the different times in which either one or the other represented the linchpin of economic activity.”²⁴¹

For a long time, the escalation in the creation of fiduciary media provided only temporary boosts to acceleration, which were followed by periods of deceleration, when people became suspicious and a large number of them tried to redeem their banknotes for coins. Since the amount of coins available was insufficient, the houses of cards erected by excessive credit expansion thereupon collapsed again. The artificial boom phase induced by credit expansion was followed by the correction of the bust phase.

In order to avoid the problems associated with confidence, commodity-backed monetary systems were preferred for a long time, which indeed went hand in hand with more sustainable periods of economic growth. Until the 19th century most monetary systems were based either on silver or on a bimetallic standard (gold and silver). After the Franco-Prussian war in 1870–71, almost all Western nations agreed to tie their currencies to gold.

Credit as an Accelerator

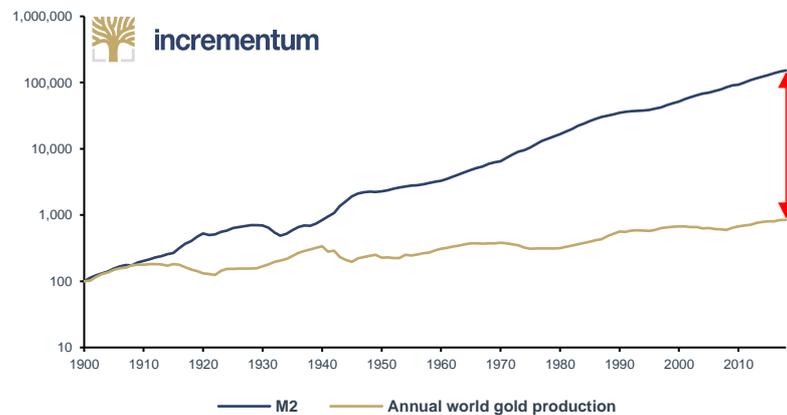
Acceleration goes hand in hand with credit expansion. Credit itself contains an accelerative element: One borrows money in order to be able to afford something more rapidly, i.e., earlier than would have been possible if one had been forced to save first. If one generates positive returns in this manner, it is possible to accumulate more money, reinvest more, or consume more over time. At the same time, borrowers are subject to obligations tied to a specific schedule: They must generate sufficient returns to be able to service their debt in a timely manner.

In a way, a gold standard prevents acceleration: The global gold supply could grow only at small single-digit rates, even if all gold mines were to maximize production. **Just as other institutions such as the nation state, the legal**

²⁴¹ Simmel, Georg: [Philosophie des Geldes \(The Philosophy of Money\)](#), Duncker & Humblot Verlag, Berlin, 1st edition, 1900, p. 579, our translation

system, and the economic order provide continuity and security, it was held that a stable, gold-backed (i.e., relatively inelastic) money was the foundation of sustainable economic growth.

M2 (USA), and annual world gold production, 1900=100 (log scale), 1900-1918



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

As is well known, several iterations of the gold standard failed: at the outbreak of World War I, in the interwar period, as well as after the end of World War II, when the gold-based Bretton Woods system was abandoned. In every case the system that was supposed to prevent unmitigated monetary acceleration fell prey to an excessive expansion of fiduciary media issued by fractionally reserved banks.

The monetary component of the transition to late modernity

The end of the Bretton-Woods system represented a massive qualitative break, as previously illegal money-supply expansion was institutionalized. In the wake of this, the money supply has grown exponentially. Our thesis is as follows: **The introduction of a pure fiat money system with the closing of the gold window by Richard Nixon in 1971 and the monetary policy of recession prevention via money printing that has prevailed since the Greenspan era, represent the monetary dimension of the epochal fault line separating classical modernity from late modernity.** Like other institutions, the monetary system was subjected to dynamization and dissolutive tendencies following this break.

With the metamorphosis into a fiat money system, the system had to be dynamically stabilized. Such systems are characterized by the fact that the maintenance of their structure depends on growth respectively acceleration. According to Rosa, modern societies are “generally marked by the fact that they are only able to dynamically stabilize and reproduce their partial segments and their social structure.”²⁴²

If one accepts Rosa’s thesis, the monetary system represents a textbook example of such a partial segment, which is subject to the principles of

Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!
The Red Queen
Through the Looking Glass,
by Lewis Carroll

²⁴² Rosa, Hartmut: Resonanz: Eine Soziologie der Weltbeziehung (Resonance - A Sociology of the Relationship to the World. Suhrkamp Verlag, 2016, p. 673, our translation

dynamic stabilization. The money supply needs an exponential growth trajectory to keep a systemic collapse at bay. **Based on Rosa’s acceleration theory, there is nothing to suggest that it makes sense to hope for a real, self-sustaining economic upswing that permits a lasting cessation of monetary stimulus or a lasting reduction in aggregate debt.** Rather, it seems likely that so-called “unconventional” monetary policy measures will become standard tools and will soon be subject to pressures for expansion. Mario Draghi has already dropped hints to that effect on several occasions.²⁴³

The Consequences of Acceleration

“The clock, not the steam-engine, is the key-machine of the modern industrial age.”

Lewis Mumford

What are the effects of acceleration on people and societies? **Rosa demonstrates that in many respects a critical threshold was crossed with the transition to late modernity, beyond which the positive promises of modernity began turning into their opposites.** In our opinion, monetary acceleration has played a prominent part in this reversal.

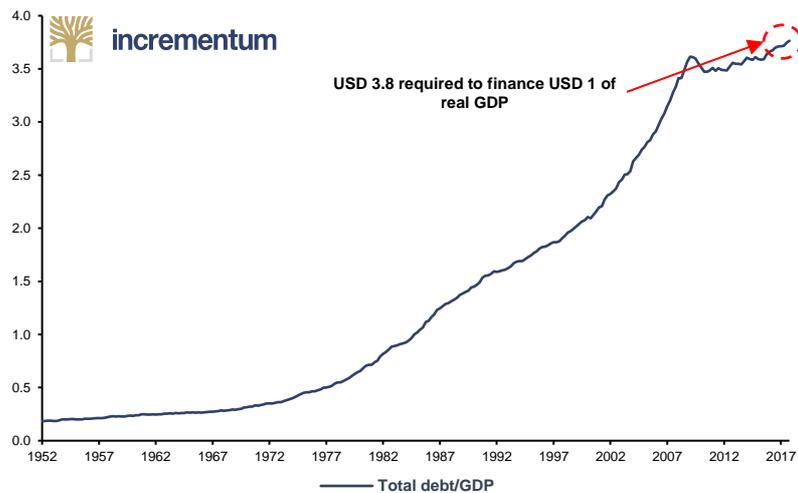
Subjects as well as organizations [are] continually busy with putting out fires, i.e., with overcoming urgent problems, but also with keeping open future options and connectivity possibilities [...] which permanently disturbs the relationship between the sequencing of their actions and the hierarchy of their preferences.

Hartmut Rosa

While people in industrialized societies enjoy ever greater material prosperity, they increasingly suffer from a perceived and actual shortage of time. Accelerating social change continually puts pressure on them to bring their knowledge up to date, build out existing advantages, and remain in good shape in order not to fall behind. In addition, the acceleration in the pace of life entails steadily growing coordination and synchronization efforts. **In short, time-related imperatives massively and increasingly hamper the capacity to shape one’s own life and hence restrict the freedom of individuals.** A substantial part of this loss of autonomy can be attributed to monetary acceleration. After all, expanding the money supply in a fiat money system is tantamount to piling up debt – and every borrower obligated to service his debt surrenders part of his future autonomy. He now *has* to make an effort and generate returns in order to service his debt. In the case of collective debt, especially government debt, younger generations are burdened with the debt accumulated by older ones, complete with its “temporal-totalitarian” consequences. Decreasing marginal utility of additional debt units can clearly be seen in the following charts.

²⁴³ “Draghi Makes Sure Stimulus Lives On Even After He Leaves the ECB”, *Bloomberg*, March 15, 2019

Total US debt/GDP, 1952-2018



Source: Federal Reserve St. Louis, Incrementum AG

But that is not all: Beyond the servicing of government debt, rising rents and property prices driven by money-supply expansion represent costs that wage earners have to handle with more or less static real incomes, whether they like it or not, before they can even begin to ask questions about an optimal work-life balance.

But it is not only the autonomy of individuals that is threatened. Organizations and political bodies are less and less able to engage in creative leadership but are instead condemned to a “reactive situativity”.²⁴⁴ Many political measures and goals such as the rescue of the euro are held to be “without alternative”. Central banks are subject to the diktat of the “inflation imperative”;²⁴⁵ read, they have to ensure that the money supply steadily expands. **The democratically elected political leadership of most Western industrialized nations must engage in moderating social and economic pressures that grow in tandem with the fiat-money supply and debt.**

Investment can be expanded only to the extent that more capital is accumulated by savings. If men are not prepared to save more by cutting down their current consumption, the means for a substantial expansion of investment are lacking. These means cannot be provided by printing banknotes or by loans on the bank books.

Ludwig von Mises

In the Great Financial Crisis of 2007–08, politicians felt obliged to rescue institutions deemed “too big to fail” and to expend billions in taxpayer funds in order to calm the situation, as a result of which government debt grew by leaps and bounds. Now, they should actually implement measures to increase the economy’s efficiency and enable sustainable growth in order not to be crushed by this debt burden in the long run. But this plan threatens to fail in light of the population’s growing misgivings. People have become noticeably dissatisfied – not least due to certain consequences of the financial crisis, such as widening wealth inequality and stagnating and even declining real wages. In Southern Europe, governments that were prepared to bow to economic constraints were replaced by populists who refused to adopt reforms (or at least were prepared to take great risks). In France, President Macron’s long overdue reform attempts have been scuttled by the resistance of the yellow vests. In a nutshell, one could describe these developments

²⁴⁴ Rosa (2005), p. 453, our translation

²⁴⁵ e.g. Rickards, Jim: “The Inflation Imperative”, *Deflation Market*, 28 August 2016

Enlightened secularism with its double commitment to self-determination and large-scale technology appears to be bidding adieu before our eyes in a global state of neglect – things just go on any way they wish; initial intentions are no longer relevant.

Peter Sloterdijk

as follows: **The acceleration of social change along with monetary acceleration is producing people who are left behind. These people have already been visible for quite some time in the form of the often-invoked Populist International.**

The Fundamental Monetary Problem

Lastly, we want to discuss a phenomenon which Rosa refers to as the “fundamental economic problem”.²⁴⁶ He postulates that the acceleration in production can only be maintained if demand follows suit, i.e., if the opening up of new markets and/or consumption accelerates correspondingly. In other words, accelerated production is only possible in the long term if the rate of consumption per unit of time increases commensurately; this is to say, if the pace of life accelerates. **It appears therefore as though the acceleration in the pace of life is an economic necessity.** Rosa remarks that “the fundamental problem of a capitalist economy ... is the maintenance of accelerated circulation.”²⁴⁷ However, this systemic necessity of the acceleration of the pace of life cannot be substantiated praxeologically. The question is therefore, why are people actually putting up with this accelerating spiral?

Having reasoned in the preceding section that a rising debt burden results in people, organizations, and governments becoming more constrained with regard to their future actions, we want to postulate the thesis that the dictate of accelerating growth is not necessarily an inherent feature of a capitalist economy, as Rosa argues, but is a problem that arises in an economy that is interlocked with a debt-money system. Rosa’s “fundamental economic problem” is therefore rather of a monetary nature, in our view.

Is there anything that would argue against a deceleration in production in favor of increased “time prosperity” on account of a shift in preferences of actors in a system based on inelastic money? In our fiat-money system, such a deceleration would lead to a devastating financial crisis and economic depression. **The efforts of central banks and governments are – as evidenced by their actions during and in the aftermath of the Great Financial Crisis – of a diametrically opposite nature: They are squeezing citizens into an ever tighter temporal straitjacket.**

²⁴⁶ Rosa (2005), p. 262, our translation

²⁴⁷ Rosa (2005), p. 262f, our translation

Conclusion

“While individuals stake up and fulfill various roles in their day-to-day life, their engagement remains just that, playing roles, which they feel does not address the core of their existence.”

Amir Ahmadi

Rosa has brought insights to light that should be of great interest to economists and persons concerned with questions of prosperity as well as of freedom and autonomy. He makes the acceleration of material, social, and spiritual conditions the focus of understanding modernity and sees a further boost in acceleration that has triggered far-reaching socioeconomic changes as the reason for the epochal break between classical and late modernity. Negative effects of the acceleration include alienation and a loss of individual and political autonomy.

As we have shown, the existing monetary system, which is characterized by the perpetual build-up of debt and whose fundamental role as the driver of many undesirable socioeconomic developments we never tire to emphasize, can be regarded as an accelerative phenomenon as well.

This planet can be a paradise in the 22nd century.

E.O. Wilson

The monetary system, once a guarantor of stability and planning security because it was tied to gold, can be maintained today only by an exponential expansion in the money supply and a persistent watering down of money’s purchasing power. **It can be argued that a core event in the epochal break between classical and late modernity was the suspension of the gold exchange standard in 1971. Ever since, mountains of credit and debt have been piled up with abandon – dictating the rhythm of economic activities via debt-service schedules.**

While in the era of classical modernity it was possible to restore synchronization through financial and economic crises, **monetary policy in late modernity is driving the acceleration caused by credit expansion to unfathomable heights. This has striking effects on the autonomy of people, who are burdened with coordination and synchronization requirements and are subjected to grave time-related pressures.** Moreover, the acceleration has a negative effect on how they relate to global society.

Increases are of sluggish growth, but the way to ruin is rapid.

Seneca

We have tried to show not only that the monetary system can be seen as an institution in the grip of acceleration dynamics, but also that it is at the same time an important, if not *the* most important, driver of social acceleration. **So if there is a widespread feeling that things are out of control, or if it is seen as a problem that only certain social groups are able to keep up with the changes, whereas other groups are left behind and the gaps between the former and the latter are widening, then according to our analysis the reform of the monetary system is a point at which to begin.**

The Crumbling Trust in Politics and Its Economic Root Cause

“The [unintended] Consequences of a Law, to reduce Interest rate... make the difficulty of Borrowing and Lending much greater, whereby Trade (the Foundation of Riches) will be obstructed.”

John Locke, 1691

Key Takeaways

- Over the last four decades the global economy transformed itself into a complex web of far reaching supply chains on back of unhinged monetary policy in an apparent virtuous symbiotic relationship between the West and East.
- This relationship was highly deflationary as the West could export their inflation which would subsequently be absorbed by the East – i.e. the Great Moderation.
- However, the underlying malinvestments accompanying the Great Moderation eventually led to a its own demise. Although expressed as balance sheet recession in the global banking community, it is better thought of as crumbling trust in the global dollar (Eurodollar).
- The new monetary order that follow will be characterized by regionalized monetary blocks rather than a global Eurodollar system, which will eventually lead to widespread stagflation as opposed to deflation.



About the author:

This chapter was contributed by our dear friend Hans Fredrik Hansen, who worked as a senior economist for several large multinational oil companies, in the US, Europe and the Middle East.

Foolishly believing it is possible to avoid economic recessions, policymakers desperate to cling to power and privilege have unintendedly created the current environment, which paradoxically will lead to their own demise. The threat to the *status quo*: political populism.

Foolishly believing it is possible to avoid economic recessions, policymakers always step in and manipulate market signals...

Every time economic activity has slowed down in the past, or even just appeared to slow down, or was perversely enough believed to slow down (e.g. Y2K), policymakers would step into the fold, manipulate market signals making sure voters were shielded from the consequences of past policy mistakes, and thus remain loyal to the system. Euphemistically, said self-proclaimed benefactors will tell the world that they were *forced* to ‘save capitalism from itself’ if they happen to be right-of-center, or alternatively the only ones that stand between the hapless voter and the ‘unbridled forces of capitalism’ if the incumbents at the time of the economic slowdown are left-of-center. Words may differ, but they all preach from the same Keynesian gospel, whether or not they believe that

“... the remedy for the boom is not a higher rate of interest but a lower rate of interest! For that may enable the so-called boom to last... thus keeping us permanently in a quasi-boom.”²⁴⁸

Or they understand that Keynes’s drivel is nothing but hogwash but can conveniently be (ab)used to foster their own narrow self-interest. Whatever language is resorted to, the difference between the ‘serious’ political parties on the ballot for voters to choose from is for all practical purposes miniscule. As can be seen from the chart below, the so-called great political divide, presented as nothing less than an existential choice is almost nonexistent in the grand scheme of things. Using the US as an example, Democrats and Republicans nit-pick over details, while broadly stay in agreement on all the substantial questions. Continental European political systems, although with more political parties for voters to choose from, confine themselves within the same narrow political spectrum.

... which has led to a political drift away from the established centre and toward authoritarianism

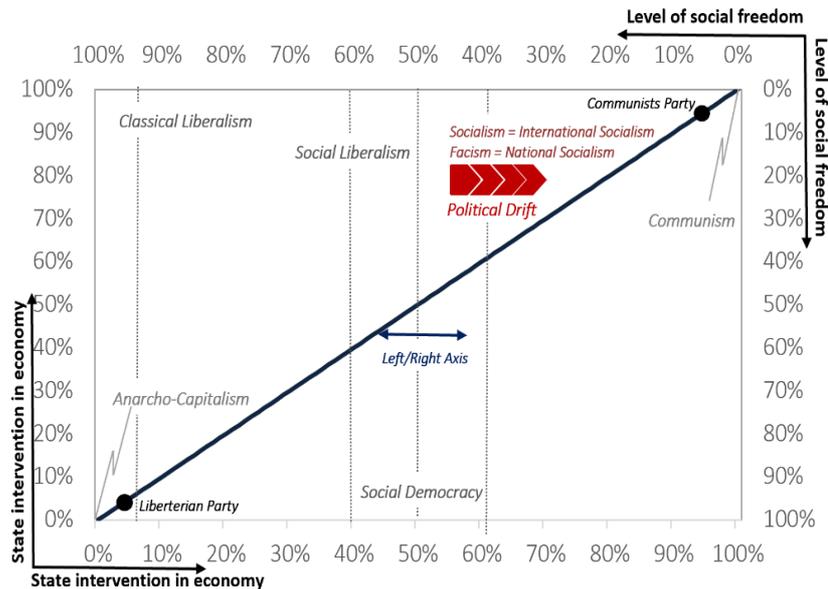
For reasons that will be discussed extensively below, the political centre is currently breaking down. Today we witness a political drift away from the established centre, a drift commonly believed to consist of two different forces, diametrically opposed to each other. Though, these forces are, just as the faltering political centre, also two sides of the same coin. The drift seen in the many political movements that sprung up on back of economic crisis is toward authoritarianism even though incongruous labelling suggest they are even more at odds with each other than the more traditional left/right parties.

One group call themselves socialists, with a stated goal of more state control of the economy. The other group, unsuccessfully, try to avoid being nametagged fascists, but they also want more control over “unbridled” capitalism. The misconception is created by the former’s fight for broad based inclusiveness, *i.e. international socialism*, whilst the latter want to restrict participation in the system to a pre-

²⁴⁸ Keynes, John Maynard: The General Theory of Employment, Interest and Money. 1936, p. 322

defined group of people, i.e. national socialism. Whatever label used to describe political drift, the end-result is a more authoritarian state.

The True Political Axis



Source: Hans Fredrik Hansen

Why? It is the Economy, Stupid!

“It’s the economy, stupid.”

Bill Clinton

The most important contributor to political stability is hope...

The single most important factor deciding people’s contentment with their place in society is hope. The idea that next year will be marginally better than the current one and that our offspring will enjoy a better life than we did is paramount to political stability. Without hope for the future, people lose the sense of being invested in the system and therefore see little cost in tearing it down. They will want to replace the *status quo* with something better; no matter how desperate it may be. Creating economic growth and hope through fictitious wealth effects using unsustainable monetary and fiscal policy had the *intended* effect of (temporarily) softening economic downcycles and boosting upcycles, but also created the *unintended* effect of eventually demoralizing the majority by removing opportunities for betterment and eventually wrecking the world economy.

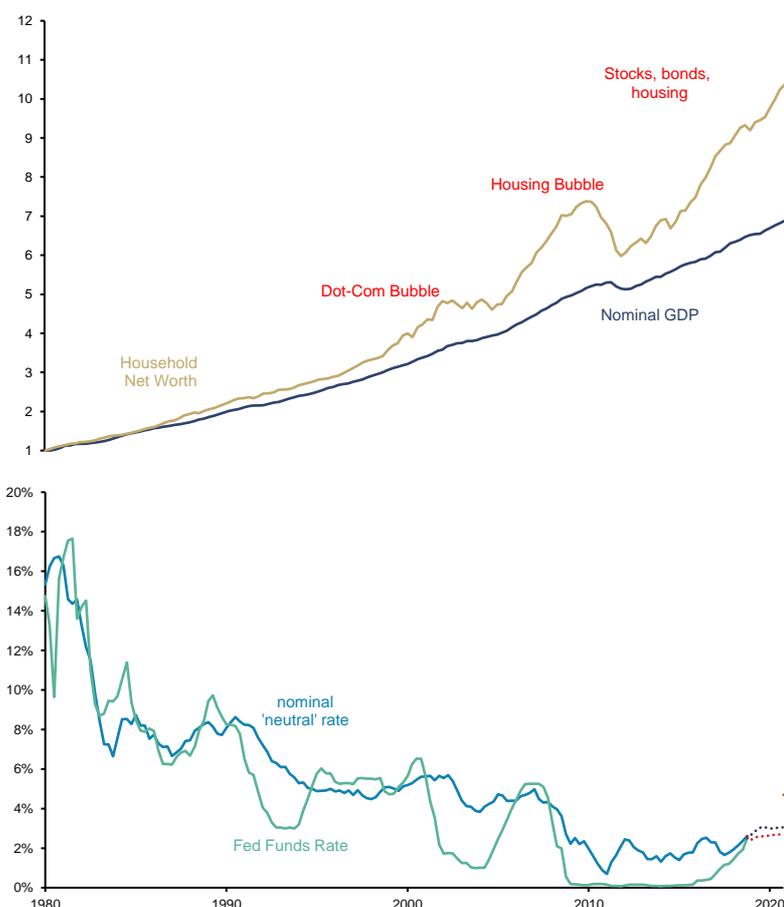
...because a society lacking hope will also lose its sense of being invested in the system and thus have little to lose from radical change...

To understand how, think of the link between GDP and assets. To produce any amount of output (=GDP) prior investments are needed. The value of those invested assets cannot permanently diverge from GDP. Total net worth as share of GDP, is like a P/E ratio for the stock market. The price of the company (=assets) cannot diverge too far from its earnings (=GDP). It can however, with government intervention, deviate for a long period of time through

the process of manipulating interest rates below the *neutral* rate²⁴⁹. Any deviation will however, with full certainty, revert back to mean. Although people may have a glimpse of hope of a better future when the value of their home increases by 10% per annum, that will quickly be taken away when it turns out it was all a mirage. As the chart above shows, asset bubbles are closely correlated with monetary policy. Keynesians advocate turning central banks into perpetual bubble machines to create *just* enough aggregate demand to fully utilize all available resources.

Unfortunately, these bubbles inevitably lead to busts, resulting in untold misery for the broader public.

Net worth vs. GDP & Fed Funds Rate vs. nominal 'neutral', in %, 1980-2018



Source: Laubach & Williams, Federal Reserve, BEA, Bloomberg, Incrementum AG

...using the mirage of wealth through bubbles may provide 'hope' in the short term, but the inevitable bust will only create even more desperation...

However, what is unseen is the effect such 'bubble' policies have had on the overall structure of the global economy. We will show that the 'perpetual bubble machine' could not operate without globalization, and globalization itself (in its current perverted form) could not have happened without the very myopic form of monetary policy that caused those economic

²⁴⁹ The neutral or natural rate of interest is the rate at which GDP grows at trend without creating any inflation. Bear in mind the natural rate cannot be observed in the market place and hence any estimation will therefore be fraught with a high degree of uncertainty.

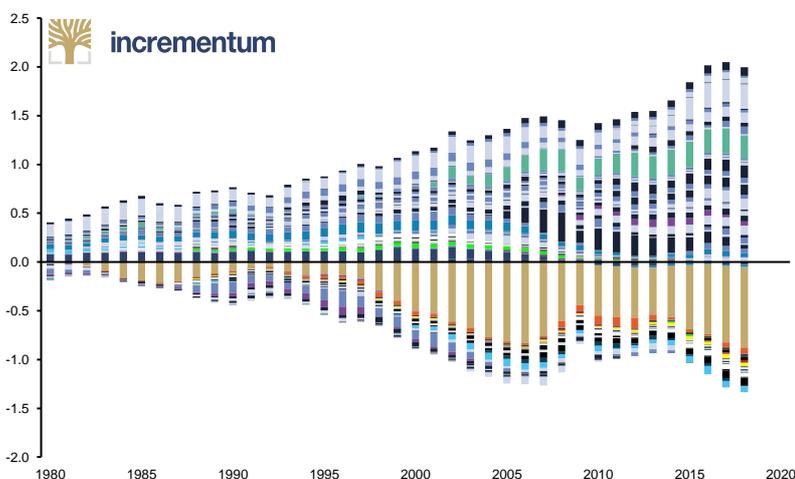
'Bubble' economics is also responsible for the debt-supercycle which distorted the global economy...

distortions that we casually refer to as bubbles.²⁵⁰ We simplify by focusing on the co-dependence between the US and China, but the depiction in Box 1 and conclusions drawn can be equally applied to the rest of the world.

Historically, domestic monetary policy and 'globalization' would restrain each other. On a commodity standard, trade deficits would cause outflows of monetary metal with a consequent contraction in domestic money supply. The process would continue until balance was re-established. Within a fixed exchange rate mechanism, trade deficits would cause pressure on exchange rate pegs vis-à-vis trading partners and force central banks to act.²⁵¹

On a fiat standard with flexible exchange rates, especially with a dominant reserve currency like the US dollar, there is no natural inbuilt mechanism that will automatically correct trade imbalances. As the chart below show, global trade imbalances can continue to grow unabated, with 'red' countries staying 'red' and blue remaining 'blue'. For growth to be sustainable, a 'red' country would eventually be forced to shift into surplus and a 'blue' country into deficit. The boom in trade and globalization over the last four decades was therefore anything but sustainable.

Trade balance, 81 countries, representing 97% of 2018 GDP, in USD tn, 1980-2018



Source: OE, Incrementum AG

The Exorbitant Privilege to Print without Abandon

“The USA will never classically default (how can it? Being the reserve currency of the world, it has

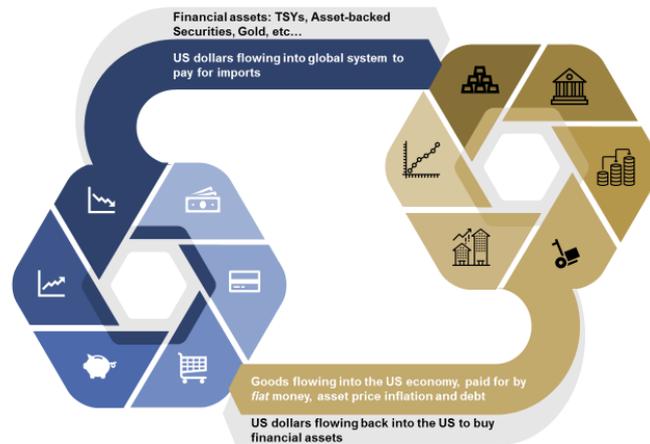
²⁵⁰ Note that a bubble, although normally defined as a price divergence from what sound fundamentals dictate, is actually far more sinister: a bubble is an economic activity that unwittingly consume capital because it is driven by fiat money creation; that is money conjured from thin air, so wealth consumers can bid away real resources from wealth producers to the detriment of all. The Cantillon effect of relative inflation create temporary winners and losers, but in the long term all lose (but some lose less than others).

²⁵¹ Central bank cooperation across borders could help maintain trade imbalances in a fixed exchange rate regime for longer than allowed under a pure 'Humeian' specie standard, but the imbalance would eventually have to be addressed.

a gigantic printing press and it gets its ink for free), the Treasury supply binge will pressure interest rates nonetheless and all the while end of crowding our private sector funding.”

Dave Rosenberg

The co-dependence between globalization and monetary policy



USA

- Central Bank accommodate commercial bank expansion by setting (too) low interest rates and supplying unlimited amounts of bank reserves at (too) low price.
- Commercial banks expand credit as the central bank provide the means (reserves) at a very low hurdle rate (Fed. funds rate) which creates high demand for borrowing among the general public, eventually resulting in fully supplied demand from unworthy borrowers.
- Debt levels increase as households spend more for consumption and houses, corporations invest (mainly in buybacks as debt financing is subsidized compared to equity), and government runs larger fiscal deficits knowing ample liquidity maintain a bid on TSYs without crowding out private demand for credit.
- Saving rates drop and newly created money bids up prices on financial assets, whilst cheap imported goods keep prices on tradable goods low.
- Financial asset price inflation lowers volatility, increase complacency and ultimately increases risk taking as yield hungry investors are forced to re-balance portfolios to maintain income levels.
- Average measured consumer price inflation falls on back of cheap imports and consequent stagnation in domestic wages as tradable sectors are outcompeted with a consequent flow of workers into low-skilled non-tradable sectors. High-skilled non-tradable sectors are the winners (at least in the short term)
- The Fed's view of persistent 'lowflation' is confirmed by stable consumer price inflation and feel comfortable enough to maintain its expansionary monetary policy.

China

- PBoC manage exchange rate by issuing Yuan to buy incoming USD. Fed. monetary policy, erroneously guided by a 'great moderation' indirectly dictates PBoC policy
- Chinese financial system is flush with liquidity as PBoC injects Yuan to sterilize USD flows. Reserve requirements plays large role in controlling credit expansion and domestic price inflation.
- Regulated deposit rates and ultra-cheap money in a fast-growing economy led to the emergence of shadow banks, helping savers enjoy higher returns, but (often covertly) amplifying risk many folds
- Subsidized capital, a low exchange rate and cheap labour brings about a largely unnatural comparative advantage in capital and labour intensive production, leading to a large trade surplus.
- With low deposit rates, few alternatives for non-bank savings and a rapidly growing 'shadow banking' system flooded with cheap money, speculative bubbles form with corresponding capital misallocation.
- Extremely loose monetary policy, a government eager to incentivize domestic consumption, speculative mania and a slowing economy has led to a massive build-up in debt.
- Despite rapid credit expansion, the PBoC is forced to absorb US inflation in order to maintain economic growth but will use so-called 'macroprudential' regulation to curb shadow banking expansion.

Source: Hans Fredrik Hansen, Incrementum AG

To be custodian of the global reserve currency comes with great benefits. Demand for the currency issued is almost guaranteed, not necessarily for purchases of goods or services supplied by the reserve currency issuer, but also to buy goods and services from third parties. The US can thus produce copious amounts of dollars without experiencing the broad-based inflationary effect that otherwise would occur. Financial assets and durable consumer goods (housing)

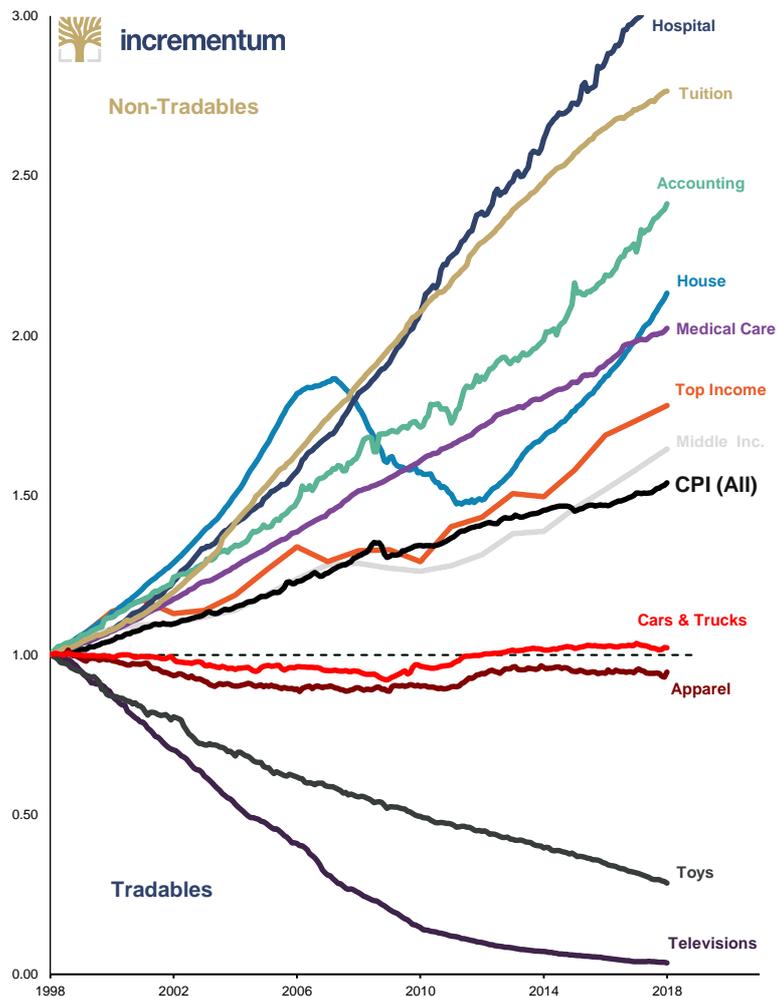
will obviously be affected by a loose monetary policy, but this effect will paradoxically help exacerbate the US dollar-expansion globally. Rising prices on financial assets and houses strengthen collateral values, improve banks' balance sheets, expand the pool of eligible borrowers and entice the very dollars used to pay for imports back into the US financial system.

*The global dollar system means
US imports are priced at zero...*

US dollars as such can be produced at a marginal cost of (close to) zero while demand for said US dollars remain unaffected. US imports are priced correspondingly (at least as long as US households are willing to become indentured debt slaves and foreigners continue to accept *fiat* USD as payment).

Obviously, no US producer can compete with a price of zero, so production of tradable goods moves offshore. Workers formerly employed in production of tradable goods are forced to seek new work in low-skilled non-tradable sectors such as the leisure and hospitality industry or other menial service sectors. By doing so they apply downward pressure on wages across all domestic, non-tradable industries. Non-tradable sectors requiring high skilled workers on the other hand will experience the opposite effect. They can charge prices in line with actual *domestic* inflation. Take the university professor as an example. He may not be alarmed by the dentist's charge as his wage roughly followed the exponential increase witnessed in tuition fees. The dentist thus finds health insurance to be affordable as he too has been able to adjust his fees accordingly. As a bonus, they can both frequent restaurants, knowing the low wages has made dining out cheaper, at least in *real* terms. But, even better, tradable goods have become significantly cheaper. The overall effect has been rising *real* wages among the professional working class within non-tradable sectors. For the rest of the population, cheaper TVs and toys are meaningless concepts when they cannot afford a roof, proper medical, dental treatment and let alone a college education without going deep into debt.

Price development of selected goods and income, 1998=1, 01/1998-01/2018



Source: BLS, FHFA, US Census, Incrementum AG

...leading to an increasing gap between the haves and the have-nots

The absence of an economically driven correcting mechanism paves the way for a political solution...

...which will lead to radical policies

Being told wages has kept up with the *average* CPI is equally meaningless when close to 100% of expenditures are confined to the non-tradable sectors. The schism between an increasingly desolate working class and a prosperous professional class is manifesting itself as a political divide. If the monetary system had allowed to correct itself this divide would not, and could not, have happened.

However, since no such mechanism exists, the only outlet becomes political. ‘The Haves’ desperately cling on to the *status quo* whilst ‘the Have Nots’ are fighting for radical change. Societies thus become politically divided, with an almost imperceptible, but steady, drift toward more authoritarianism. Paradoxically the animosity between the two sides inevitably bring the political system down the same road toward despotism. And if history has thought us anything it is that despotic systems are not suitable to fix problems of general discontent, on the contrary, they tend to aggravate them, fueling demands for even more radical solutions *ad infinitum*.

Nothing moves in a straight line, but the general trend in the world of Western politics is and will continue to be one of more intrusive state control, less free

trade, increasing use of (coordinated) fiscal and monetary tools (potentially with radically different distributional effects than witnessed so far) and more hostility toward real or imaginary enemies. **Kicking the proverbial can has by now become an exhausted strategy, heralding an imminent transformation of the political system as we know it today.**

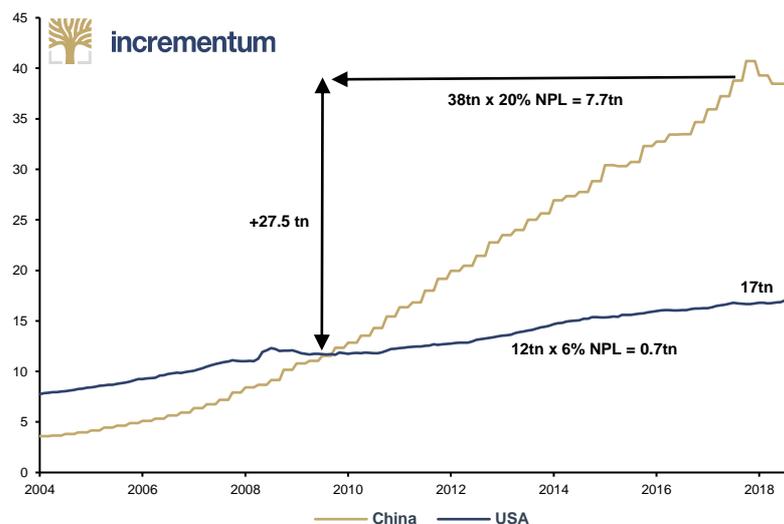
When Political Change Is Impossible

“It is not the strongest who survive, nor the most intelligent, but the most responsive to change.”

Charles Darwin

In China the political pressure for change is less pressing as people still enjoy relatively rapid growth and improved standards of living. Nonetheless, ramifications stemming from the ongoing/coming political revolution in the West will also adversely affect China.

Total bank assets, in USD tn, 30/06/2004-31/01/2019



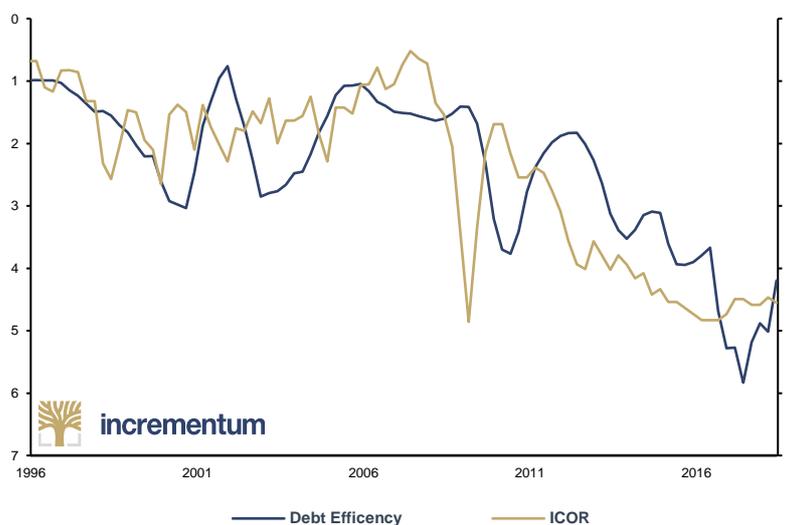
Source: Bloomberg, Incrementum AG

China internalized Western bubble policies, absorbed their inflation, and created an internal NPL problem...

As shown above, China has to a large extent internalized US monetary policy, which generate capital misallocations and a large, but obfuscated, non-performing loan (NPL) problem. Making matters worse, China felt forced to expand domestic debt in the wake of the financial crisis to substitute failing external demand with credit driven internal demand. From the depth of the financial crisis to the present, China’s banks grew their assets by more than USD 27trn. In comparison, the entire US banking system today is just under USD 17trn. Serious China-watchers believe the actual NPL-ratio is at least 20% of banking assets; totaling almost USD 8trn. The US banking system struggled to cope with 6% NPLs on a USD 12trn banking system at the height of their banking crisis. When the next global downturn hits, whether that will be in 2019 or 2020, China will quickly realize that it will become very difficult, if not impossible to

repeat the *grand* Keynesian experiment of 2009. The stimulus package back then helped fund current consumption rather than productive investments, which ultimately weakened the economy's ability to service its larger, and growing, debt burden.

USD of debt needed to produce 1USD of GDP, inverted (left scale), incremental capital output ratio (ICOR), inverted (right scale), 01/1996-06/2018



Source: BIS, OE, Incrementum AG

Measures of efficient capital allocation, such as the amount of debt needed to produce one unit of GDP or the incremental capital-output ratio (ICOR), the investment needed to grow the economy, both deteriorated dramatically with the onset of large-scale stimulus. Before the crisis, the Chinese economy was able to produce USD 1 of GDP for less than USD 2 of debt. After the stimulus on the other hand, the Chinese economy needs increasingly more debt to produce the same unit of GDP. Likewise, capital efficiency was stable prior to the crisis, but worsened markedly after. **Insisting on maintaining high 'growth' rates is tantamount to an exponentially rising debt/GDP ratio as debt must necessarily grow even faster.**

...which can only be solved by deleveraging the financial system at the expense of credit-dependent economic growth...

Bringing back organic, self-propelled growth requires deep structural reforms. Enacting such reforms means allowing a deep economic recession, which is the most politically untenable and unacceptable choice for any Chinese policymaker.

And this brings us to the crux of the China-argument. Although the PBoC has to a large extent internalized US monetary policy, they managed to maintain some flexibility by closing their capital account and more recently moving to a 'soft' peg vis-à-vis the USD. However, monetary policy can only be as flexible as capital flow restrictions are effective. Unfortunately for the PBoC, capital accounts are notoriously prone to leaks, as demonstrated by the USD 1trn outflow from 2014 onwards. When the banking system inevitably needs to be recapitalized, the government will expect the PBoC to do the heavy lifting. Assuming a generous recovery rate of 50% on NPLs, the PBoC

will have to come up with USD 4trn dollars in Yuan to cover the gap, at which point the infamous Impossible Trinity kicks in.

...at the expense of a large RMB devaluation

The policy trilemma states that a country must choose between free capital mobility, exchange-rate management and monetary autonomy. At any given time, a sovereign will only be able to pursue two out of these three policy goals at the same time. Running the printing press to deal with NPLs certainly implies monetary policy autonomy, while the loss of USD 1trn dollar during the 2014/15 period suggest it will be impossible to keep the capital account fully closed. That leaves only one option; a material devaluation of the RMB. China is not alone in having to make this choice, other emerging markets will face the same pressure, but due to China's immense importance in the global economy, the choices made in Beijing comes with far greater repercussions.

The Great Unravelling

“This inability to rally may reflect threats to the US dollar’s role as a reserve currency – runaway budget deficits threaten it at home, while China’s attempt to ‘de-dollarize’ trade in Asia and commodities is a threat internationally. If China is even a little bit successful in shifting the global commodity trade from dollars to renminbi, demand for the US currency could fall sharply.”

Gavekal

The Great Financial Crisis was caused by a lack of trust in global (euro) dollars, not CDO^2...

The trend in globalization and monetary policy set in motion on August 15th, 1971, when Nixon devalued the US dollar against gold, led to unprecedented economic distortions in the world economy. The Federal Reserve accompanied by the global banking system was given, admittedly after some doubts in the 1970s, a license to expand their balance sheets at will. China would, in its own interest, absorb the inflation emitted from global central- and commercial banks exponentially growing balance sheets.

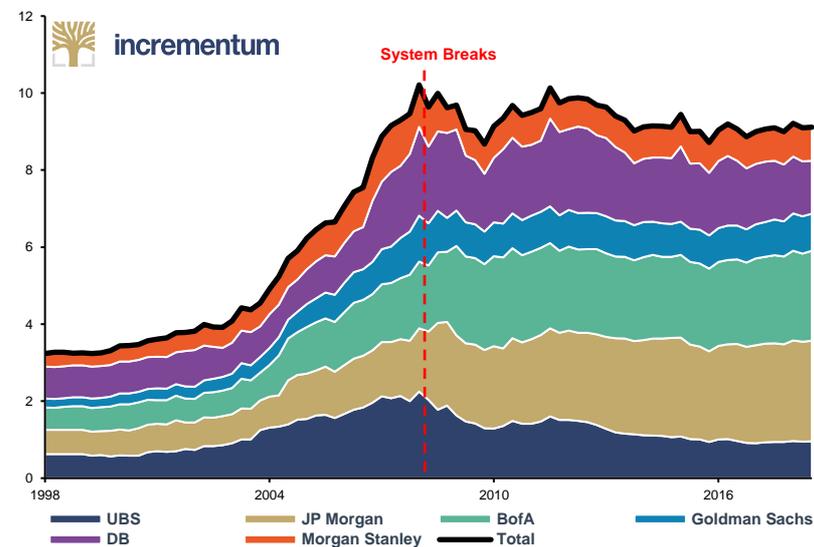
Ironically it was Nixon who helped bring forth the new monetary system and also opened up to China, which ultimately helped sustain his *fiat* monetary arrangement for as long as it did.

For every setback, such as in 1987, the early 1990s, 1997/97, 2001 and 2009, the default option was to ‘print’ more money, until central banks became not only the marginal, but the *main* conduit, for reserves supplied into the financial system. A point well worth noting as quantitative tightening intensified in the course of 2018.

The systems’ demise was inevitable by the way it was set up from the beginning, but due to the enormous amount of capital available in the global economy, the euro-dollar system was allowed to grow for more than four decades before its

innate parasitical nature finally ended it in 2008; which basically was a point of balance sheet capacity exhaustion by the multinational banks.

Selected global dollar-based banks' balance sheets, in USD tn, 06/1998-09/2018



Source: Bloomberg, Incrementum AG

...with a consequent stop in further banks' balance sheet expansion.

Without globalization to absorb inflation, monetary policy will be far more constrained...

A class of 'have-nots' in the West, incentivized by the joint force of loose monetary policy and globalization, has today grown large enough to be a political force with real influence. They have and will continue to elect politicians willing to act in a way that, more often than not, is expressed in terms of anti-globalization. Corresponding policies will aim directly at institutions maintaining the trade- and capital flow binding economies together.

With globalization in retreat, central banks such as the Federal Reserve, ECB, BoE and BoJ will be far more constrained as inflation will increasingly stay within the borders of the respective central bank's jurisdictions, rather than being exported to China and other emerging markets. In other words, negative consequences from inflation will become more apparent, which creates a far more elaborate environment for central bankers to navigate. Soon they might be faced with high and rising inflation in the midst of a recessionary economy. Needless to say, central bankers will err on the side of too much inflation, but that will raise interest rates for governments, households and corporations alike. The problem is that higher interest rates on USD 180trn worth of debt in a USD 50trn (advanced markets) economy is not sustainable. If the USD 180trn worth of debt is issued at a rate of 1%, Western economies spend 4% of their GDP paying interest per year. If interest rates rise to 10%, a staggering 36% of GDP will be needed just to service interest. Obviously, some of the debt is held within the same economic area, but the amount of income distribution and level of deleveraging that would be accompanied by such a shift in interest rates is of such a scale that it guarantees economic depression.

Complicating matter even more, the unescapable RMB devaluation will finally brand China a 'currency manipulator' by the US; ensuring even

more active use of protectionist policy measures making both the West and China's situation even worse as a vicious feedback loop between political turmoil in the West pitted against the economic wellbeing in China is set in motion. **In short, the virtuous financial market trends of lower interest rates, higher stock markets, low(er) and stable price inflation might all turn from here.**

US 10-year Treasury yield, in %, 01/62-12/2038e



Source: Bloomberg, Incrementum AG

...creating hard economic constraints policymakers haven't experienced in over four decades...

...but on a pure fiat money standard there is nothing left to default on, except the nominal value of the debt itself

In order to get a good view of the future, we should look to the past. The 1960s, dubbed the 'golden age' was a period of sustained growth, low inflation and rising financial markets much like the 1980s and 1990s. However, the prosperity gradually came to an end as the US inflated its currency to pay for President Johnson's 'Great Society' and a costly war in Vietnam. It all culminated with President Nixon's default in the early 1970s and the consequent stagflation.

Similarly, today we witness the end of the 'great moderation' spurred on by monetary inflation to pay for a financial crisis bailout, increased government consumption and also costly wars. However, in a pure fiat monetary standard there is nothing left to default on, beside the nominal value of the debt itself. The complete de-linking from gold in the 1970s was only perceived as a success due to the level of globalization that followed. With nothing to default on and no outlet for further fiat inflation, the proverbial can has run out of road. The next phase will be one of higher inflation, volatility, debt defaults, social unrest and even wars. Superimpose the financial market developments in the 20 years from 1962 to 2019 and you get as good a forecast as any. The world we have become accustomed to is about to change radically. All the trends once taken for granted will be turned up-side down. **The increased interest in Modern Monetary Theory (MMT) is proof enough. Adjust your portfolio accordingly.**

Concluding Remarks

“So, the real economic struggle between the US and China may not be fought out over trade or technology, but end up as a monetary war.”

Gavekal

A ‘buy-and-hold’ approach only works if financial markets and societal trends are stable. It is safe to say that the forty-year-old trend that culminated with the GFC and its aftermath is over. The next decade or so might be characterized by secular trend reversals.

In summary:

- The positive feedback loop created within the nexus between unhinged central banking and unprecedented levels of globalization is coming to an end.
- In the West, the outlet has and will continue to be political in nature. Unconstrained central banking depleted a rich capital base, or pool of real savings, to such an extent that it reduced Western workers’ productivity, *real* wages and by extension purchasing power.
- A shift toward a credit-based economy helped paper over the loss of purchasing power until the edifice came crashing down in 2008. With the debt-for-purchasing-power swap no longer available, the masses could not be placated, hence the move toward authoritarianism and radical change for the sake for change.
- In emerging markets, which benefitted from globalization through their role as ‘vendor financiers’ for the profligate West, the loss of important consumer markets will naturally lead to economic stress as their economies have become tightly-knit into the global central banking / trade nexus. Businesses have invested heavily to serve Western consumers, mostly by funding themselves in local financial markets. When these investments turn out to be *malinvestments*, it will add to the NPL problem already exacerbated by legacy debt created by past government stimulus.
- With the nexus breaking down, central banking becomes regionalized, meaning the old default option used to ‘fix’ any disturbance to economic systems will be counterproductive since stagflation, and not the habitual deflation we are now accustomed to, becomes widespread. To substantiate this argument, think of the 1970s, a period characterized by the transition from one monetary world order to a new one, which was also a period of stagflation.

The trend reversal and transition to a new, hopefully more stable system will potentially be beset with inflation, volatility, economic contraction, debt and welfare defaults and consequent societal problems.

Hyperinflation: Much Talked About, Little Understood

“Hyperinflation can take virtually your entire life's savings, without the government having to bother raising the official tax rate at all.”

Thomas Sowell

Key Takeaways

- The conventional definition of hyperinflation classifies an inflation as hyperinflation, if the monthly inflation rate exceeds 50%, as proposed by Philip Cagan.
- A better definition is to define any inflation as hyperinflation, if the inflation rate exceeds 50% per month for at least thirty consecutive days.
- The worst hyperinflation in history occurred in Hungary in 1946, followed by Zimbabwe (2008), while the most memorable hyperinflation, i.e. in Germany (1923) ranks only fifth.



Prof. Steve H. Hanke © Steve Hanke

About the author: Steve H. Hanke is a Professor of Applied Economics at the Johns Hopkins University, a Senior Fellow at the Cato Institute in Washington, D.C., and the Gottfried von Haberler Professor at the European Center for Austrian Economics Foundation in Vaduz, Liechtenstein.

The word *hyperinflation* is sprinkled throughout the press each day.

We read that Iran is hyperinflating. The same is written about Zimbabwe and Venezuela, as well as a potpourri of other countries that are experiencing inflation flareups. While Iran came close to a hyperinflation in the fall of 2012, it has never experienced an episode of hyperinflation.²⁵² And, while Zimbabwe experienced hyperinflation episodes in 2007-2008²⁵³ and 2017²⁵⁴, it is not hyperinflating now. At present, Venezuela is the only country experiencing a hyperinflation.²⁵⁵ It's clear that journalists and those they interview tend to play fast and loose with the word *hyperinflation*.

To clean up the hyperinflation landscape, we must heed the words of the great Eugen von Böhm-Bawerk, one of the founders of the Austrian School of Economics, who, in 1891, wrote:

*"[W]e too must bring into our science a strict order and discipline, which we are still far from having. ... [B]y a disorderly and ambiguous terminology we are led into the most palpable mistakes and misunderstandings — all these failings are of so frequent occurrence in our science that they almost seem to be characteristic of its style."*²⁵⁶

Inflation is as violent as a mugger, as frightening as an armed robber and as deadly as a hit man.

Ronald Reagan

Yes. Nothing cleans up ambiguity and disorder better than clear definitions. So, just what is the definition of the oft-misused word *hyperinflation*? **The convention adopted in the scientific literature is to classify an inflation as a hyperinflation if the monthly inflation rate exceeds 50%.** This definition was adopted in 1956, after Economist Phillip Cagan published his seminal analysis of hyperinflation, which appeared in the book *Studies in the Quantity Theory of Money*, edited by Milton Friedman.²⁵⁷

Since I use high-frequency (daily) data to measure inflation in countries where inflation is elevated, I have been able to refine Cagan's 50% per month hyperinflation hurdle. **With improved measurement techniques, I now define a hyperinflation as an inflation in which the inflation rate exceeds 50% per month for at least thirty consecutive days.**²⁵⁸

After years of research with the help of many assistants, I have documented, with primary data, 58 episodes of hyperinflation. Those episodes are listed in the "Hanke-Krus World Hyperinflation Table" (2013, Amended 2017) below.²⁵⁹

²⁵² Hanke, Steve H., and Krus, Nicholas: "World Hyperinflations", in: Whaples, Robert and Parker, Randall (eds.): Routledge Handbook of Major Events in Economic History, 2013

²⁵³ Hanke, Steve H., and Kwok, Alex: "On the Measurement of Zimbabwe's Hyperinflation", *Cato Journal*, Vol. 29, Nr. 2, 2009, pp. 353-64

²⁵⁴ Hanke, Steve H., and Bostrom, Erik: "Zimbabwe Hyperinflates, Again: The 58th Episode of Hyperinflation in History", *Studies in Applied Economics*, No. 90, October 2017

²⁵⁵ Hanke, Steve H., and Bushnell, Charles: "On Measuring Hyperinflation: Venezuela's Episode", *World Economics*, Vol. 18, No. 3, July–September 2017, pp. 1-18

²⁵⁶ Böhm-Bawerk, Eugen and Leonard, Henrietta: "The Austrian economists", *The Annals of the American Academy of Political and Social Science*, Vol. 1, 1891, pp. 361-84, here: p. 382

²⁵⁷ Cagan, Phillip: "The Monetary Dynamics of Hyperinflation", in Friedman, Milton (ed.): *Studies in the Quantity Theory of Money*, 1956

²⁵⁸ Hanke, Steve H., and Bushnell, Charles: "On Measuring Hyperinflation: Venezuela's Episode", *World Economics*, Vol. 18, No. 3, July–September 2017, pp. 1-18

²⁵⁹ Hanke, Steve H., and Bostrom, Erik: "Zimbabwe Hyperinflates, Again: The 58th Episode of Hyperinflation in History", *Studies in Applied Economics*, No. 90, October 2017

The Hanke-Krus World Hyperinflation Table (2013, amended 10/2017)

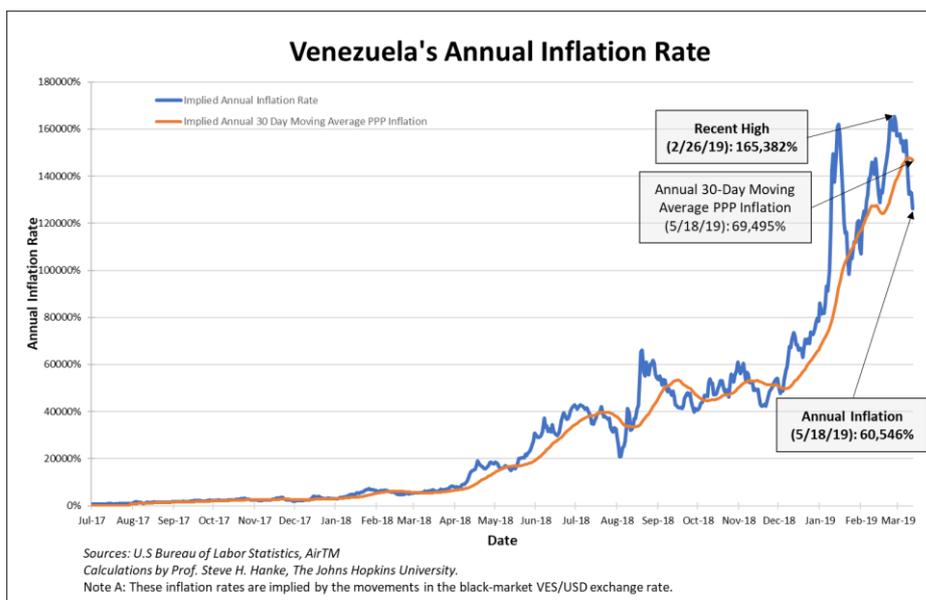
Nation	Month with highest inflation rate	Highest monthly inflation rate	The prices double each
Hungary	Jul 1946	4,19 x 10 ¹⁶ %	15.0 Hours
Zimbabwe	Mid-Nov 2008	7,96 x 10 ¹⁰ %	24.7 Hours
Yugoslavia	Jan 1994	313,000,000%	1.41 Days
Croatia	Jan 1994	297,000,000%	1.41 Days
Germany	Oct 1923	29,500%	3.70 Days
Greece	Oct 1944	13,800%	4.27 Days
China	Apr 1949	5,070%	5.34 Days
Free state Danzig	Sep 1923	2,440%	6.52 Days
Armenia	Nov 1993	438%	12.5 Days
Turkmenistan	Nov 1993	429%	12.7 Days
Taiwan	Aug 1945	399%	13.1 Days
Peru	Aug 1990	397%	13.1 Days
Bosnia Herzegovina	Jun 1992	322%	14.6 Days
France	Mid-Aug 1796	304%	15.1 Days
China	Jun 1945	302%	15.2 Days
Ukraine	Jan 1992	285%	15.6 Days
Poland	Oct 1923	275%	16.0 Days
Nicaragua	Mar 1991	261%	16.4 Days
Congo (Zaire)	Nov 1993	250%	16.8 Days
Russia	Jan 1992	245%	17.0 Days
Bulgaria	Feb 1997	242%	17.1 Days
Moldova	Jan 1992	240%	17.2 Days
Venezuela	Nov 2016	219%	17.9 Days
Russia / USSR	Feb 1924	212%	18.5 Days
Georgia	Sep 1994	211%	18.6 Days
Tajikistan	Jan 1992	201%	19.1 Days
Georgia	Mar 1992	198%	19.3 Days
Argentina	Jul 1989	197%	19.4 Days
Zimbabwe	Oct 2017	185%	20.1 Days
Bolivia	Feb 1985	183%	20.3 Days
Belarus	Jan 1992	159%	22.2 Days
Kyrgyzstan	Jan 1992	157%	22.3 Days
Kazakhstan	Jan 1992	141%	24.0 Days
Austria	Aug 1922	129%	25.5 Days
Bulgaria	Feb 1991	123%	26.3 Days
Uzbekistan	Jan 1992	118%	27.0 Days
Azerbaijan	Jan 1992	118%	27.0 Days
Congo (Zaire)	Nov 1991	114%	27.7 Days
Peru	Sep 1988	114%	27.7 Days
Taiwan	Oct 1948	108%	28.9 Days
Hungary	Jul 1923	97.90%	30.9 Days
Chile	Oct 1973	87.60%	33.5 Days
Estonia	Jan 1992	87.20%	33.6 Days
Angola	May 1996	84.10%	34.5 Days
Brazil	Mar 1990	82.40%	35.1 Days
D,R, Congo	Aug 1998	78.50%	36.4 Days
Poland	Jan 1990	77.30%	36.8 Days
Armenia	Jan 1992	73.10%	38.4 Days
Tajikistan	Nov 1995	65.20%	42.0 Days
Latvia	Jan 1992	64.40%	42.4 Days
Turkmenistan	Jan 1996	62.50%	43.4 Days
Philippines	Jan 1944	60.00%	44.9 Days
Yugoslavia	Dec 1989	59.70%	45.1 Days
Germany	Jan 1920	56.90%	46.8 Days
Kazakhstan	Nov 1993	55.50%	47.8 Days

Source: Hanke, Steve H., und Bostrom, Erik: "Zimbabwe Hyperinflates. Again: The 58th Episode of Hyperinflation in History", *Studies in Applied Economics*, No. 90, 2017. Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise, October 19, 2018, Incrementum AG

Money, like chocolate on a hot oven, was melting in the pockets of the people.

Ludwig von Mises

Hungary holds down the top spot. Its peak hyperinflation occurred in July 1946, when prices were doubling every 15 hours. Zimbabwe's November 2008 hyperinflation peak is the second highest, but way behind Hungary's. Indeed, at their peaks, the daily inflation rates were 207% in Hungary and 98% in Zimbabwe. The most memorable hyperinflation was Germany's. But, it only ranks as the fifth highest, with a peak daily rate of inflation of 20.9% — way lower than the top four rates.



Now, let's turn to the world's only current hyperinflation: Venezuela. It ranks as the 23rd most severe. Today, the annual rate of inflation is 131,870% per year. While this rate is modest by hyperinflation standards, the duration of Venezuela's hyperinflation episode, as of today, is one of the longest: 29 months. Only four episodes of hyperinflation have been more longer.

Inflation is the fiscal complement of statism and arbitrary government. It is a cog in the complex of policies and institutions which gradually lead toward totalitarianism.

Ludwig von Mises

So, how do we accurately measure hyperinflations? Well, let's take a look at Venezuela's case. There is only one reliable way to measure. The most important price in an economy is the exchange rate between the local currency — in this case, the bolivar — and the world's reserve currency, the US dollar. As long as there is an active black market (read: free market) for currency and the data are available, changes in the black-market exchange rate can be reliably transformed into accurate measurements of countrywide inflation rates. The economic principle of purchasing power parity (PPP) allows for this transformation. And, the application of PPP to measure elevated inflation rates is rather simple.

Evidence from Germany's 1920-1923 hyperinflation episode — as reported by Jacob Frenkel in the July 1976 issue of the *Scandinavian Journal of Economics*²⁶⁰ — confirms the accuracy of PPP during hyperinflations. Frenkel plotted the Deutschmark/US dollar exchange rate

²⁶⁰ Frenkel, Jacob: "A Monetary Approach to the Exchange Rate: Doctrinal Aspects and Empirical Evidence", *The Scandinavian Journal of Economics*, Vol. 78, No. 2, June 1976, pp. 200-24

against both the German wholesale price index and the consumer price index (CPI). The correlations between Germany's exchange rate and the two price indices were very close to unity throughout the period, with the correlations moving to unity as the inflation rate increased.

Beyond the theory of PPP, the intuition of why PPP represents the 'gold standard' for measuring inflation during hyperinflation episodes is clear. All items in an economy that is hyperinflating are either priced in a stable foreign currency (the US dollar) or a local currency (the bolivar). If goods are priced in terms of bolivars, those prices are determined by referring to the dollar prices of goods, and then converting them to local bolivar prices after checking with the spot black-market exchange rate. Indeed, when the price level is increasing rapidly and erratically on a day-by-day, hour-by-hour, or even minute by-minute basis, exchange rate quotations are the only source of information on how fast inflation is actually proceeding. That is why PPP holds, and why we can use high-frequency (daily) data to calculate Venezuela's inflation rate, even during episodes of hyperinflation.

Even though we can measure hyperinflation very accurately using PPP, no one has ever been able to forecast the magnitude or direction of hyperinflations. But, that hasn't stopped the International Monetary Fund (IMF) from producing forecasts for hyperinflation in Venezuela. Even though the IMF does not measure Venezuela's hyperinflation, something that can be reliably done, the IMF does forecast its hyperinflation, something that cannot be reliably done. Indeed, forecasts for hyperinflation can't be found in the scientific literature.

That impossibility hasn't stopped the IMF from throwing economic science to the winds. Yes, the IMF has regularly been reporting what are, in fact, absurd inflation forecasts for Venezuela. These forecasts have been issued under the watchful eye of Alejandro Werner, the head of the IMF's Western Hemisphere Department. The chart below presents the IMF's finger-in-the-wind forecasts (read: nonsensical folly).²⁶¹

The IMF's 2018 year-end inflation projections for Venezuela

Date of Projection	IMF Inflation Projection
October 2018	2,500,000%
July 2018	1,000,000%
April 2018	12,874.6%
October 2017	2,529.6%
April 2017	2,529.6%

Source: IMF, Incrementum AG

Surprisingly, the press dutifully reported the IMF's forecasts that Venezuela's annual inflation rate would hit a whopping 2,500,000% by the end of 2018. In some cases, this figure was reported as a forecast, which it was. By others, however, it was even reported as an actual measurement, which it was not. In any

²⁶¹ Hanke, Steve H.: "Venezuela's Hyperinflation, 24 Months and Counting", *Forbes.com*, October 23, 2018

I don't mind going back to daylight saving time. With inflation, the hour will be the only thing I've saved all year.

Victor Borge

case, the IMF's "guesstimation" was a bit off. I measured Venezuela's annual inflation rate on December 31, 2018, and it was 80,000% per year. When it comes to hyperinflation and its abuses, there is no one guiltier of malfeasance than the IMF. It repeatedly produces what no one can produce: reliable forecasts of hyperinflation. Nevermind.

But, just what drives the money supply and inflation to astronomical heights? In hyperinflations, the "printing presses" go into overdrive because governments spend, and all the sources for funding their largess either never existed or wither away, except one: central banks.

To set the stage, in a pre-hyperinflation situation, when a full array of financing options is available, government expenditures can be financed by taxes, by the domestic and international bond markets, by revenue from state-owned enterprises, and by central banks. In addition, governments can defer payments by accumulating arrears. So, arrears are also a means of "funding." Governments can also go hat-in-hand to obtain foreign aid, yet another source of funding.

When the Soviet Union collapsed, there was an outbreak of hyperinflation episodes. Indeed, 21 of the 58 world hyperinflation episodes occurred in newly independent countries of the former Soviet Union. Why? Well, under communism, there were no "taxes" and no tax administrations for assessing and collecting taxes. So, the newly independent states were not set up to levy and administer taxes. In addition, they had, at best, only fledgling domestic bond markets, and for the most part, their access to international bond markets was limited. So, they initially piled up mountains of arrears and passed the begging bowl. **But, eventually, their fiscal authorities went to their central banks and forced them to purchase the governments' obligations. That is when the printing presses were turned on, and the money supplies surged. And, so did inflation.**

Inflation is taxation without legislation.

Milton Friedman

In addition to the hyperinflation episodes in countries of the former Soviet Union, there were seven episodes in the early 1990s in countries that had abandoned communism, like Bulgaria, Poland, and Yugoslavia. These countries all, in varying degrees, faced the same government funding problems as did those in the former Soviet Union. Almost half of the 58 recorded hyperinflations occurred in the 1990s and were the result of the funding deficiencies associated with the new post-communist states.

I became very familiar with one of these countries. In 1990, I became the chief adviser to the first post-communist government in Yugoslavia. The post-communist Yugoslavia faced many of the same problems that other post-communist countries faced. However, Yugoslavia was different than the others in several important respects. For example, it had an endemic, open inflation problem. During the twenty-year period 1971-1991, Yugoslavia's inflation rate averaged 76% per year. Only Zaire and Brazil had worse records.

The advocates of public control cannot do without inflation. They need it in order to finance their policy of reckless spending and of lavishly subsidizing and bribing the voters.

Ludwig von Mises

The never-ending Yugoslav inflation created problems with taxes as a source of government funding. **Indeed, inflation mixed with taxes is a deadly cocktail. Vito Tanzi figured out just how deadly that cocktail is while he was working in Argentina during the 1970s. Tanzi found that when inflation was elevated and rising, government revenues from taxes plunged because of what has become known as the “Tanzi Effect.”**²⁶²

How does the Tanzi Effect work? There is an interval between the occurrence of a “taxable event” and the actual payment of taxes to the government. When inflation is elevated and rising, the destruction of the real value of the taxes levied can become very important. For example, if a tax collection lag is only one month and the inflation rate is 50% per month, the threshold rate to qualify as a hyperinflation, inflation would result in a 50% reduction in the real value of the taxes levied. **So, the Tanzi Effect, which Tanzi devotes a chapter to in his new fascinating book, *Argentina from Peron to Macri: An Economic Chronicle*, describes the dynamics of the withering away of taxes as a source of finance during a hyperinflation.**

The Tanzi Effect creates a doom loop. With hyperinflation, doom loops can reach extremes. Yugoslavia is but one example. In January of 1994, the monthly rate of inflation reached a stunning 313,000,000%, the third highest hyperinflation in recorded history. At that time, my friend and collaborator Zeljko Bogetic and his colleagues determined that virtually all of Belgrade’s revenue sources had dried up. In consequence, an astounding 95% of government expenditures were being financed by the central banks’ printing press.²⁶³

I do not think it is an exaggeration to say history is largely a history of inflation, usually inflations engineered by governments for the gain of governments.

Friedrich August von Hayek

All this printing, the collapse of the dinar, and hyperinflation infuriated Slobodan Milosevic. As the one who was accurately measuring Yugoslavia’s inflation, I became a marked man.²⁶⁴ The Yugoslav Information Minister, Goran Matic, produced a steady stream of bizarre stories about my alleged activities. These were disseminated via the Yugoslav state news agency, Tanjug. Among other allegations, I was accused of being the leader of a smuggling ring that was destabilizing the Serbian economy by flooding it with counterfeit Yugoslav dinars. The most spectacular accusation, however, was that I was a French secret agent who controlled a hit-team code-named “Pauk” (“Spider”), and that this five-man team’s mission was to assassinate President Milosevic.²⁶⁵

Politicians never take responsibility for creating hyperinflations. They always place the blame somewhere else. But, the cause is always the same. As traditional funding sources dry up, the central bank’s printing presses go into overdrive, as they become the only funding source for the government’s largess. And with that, hyperinflation raises its ugly head.

²⁶² Tanzi, Vito: *Argentina: An Economic Chronicle*. 2007

²⁶³ Petrovic, P., Bogetic, Z. and Vujošević, Z.: “The Yugoslav Hyperinflation of 1992–1994: Causes, Dynamics, and Money Supply Process”, *Journal of Comparative Economics*, Vol. 27, No. 2, 1999, pp. 335–53

²⁶⁴ Hanke, Steve H.: “Yugoslavia Destroyed Its Own Economy”, *Wall Street Journal*, April 28, 1999

²⁶⁵ Hanke, Steve H.: “Remembrances of a Currency Reformer: Some Notes and Sketches from the Field”, *Studies in Applied Economics*, No. 55, June 2016



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Gold Bonds: Bringing Back an Extinguisher of Debt to the Bond Market

“Gold is the ultimate extinguisher of debt and, as such, it has no substitute. In particular, no irredeemable currency can ever measure up to gold as the ultimate extinguisher of debt.”

Prof. Antal Fekete

Key Takeaways

- A gold bond is denominated in gold, with principal and interest payable in gold.
- Interest payable in gold is the incentive for gold owners to bring their gold to the market, as hoarding gold carries the additional opportunity cost of (gold) interest foregone.
- Bringing back an extinguisher of debt to the bond market, i.e. gold, relieves the economy from the fiat money’s dynamic tendency to ever-increasing debt levels.



Keith Weiner,
CEO Monetary Metals
Photo Credit: Keith Weiner

About the author: Keith Weiner is the founder and CEO of Monetary Metals, and is a leading authority in the areas of gold, money, and credit and has made important contributions to the development of trading techniques founded upon the analysis of bid-ask spreads. He is the founder of DiamondWare, a software company sold to Nortel in 2008, and he currently serves as President of the Gold Standard Institute USA. He earned his PhD from the New Austrian School of Economics. (non-accredited)

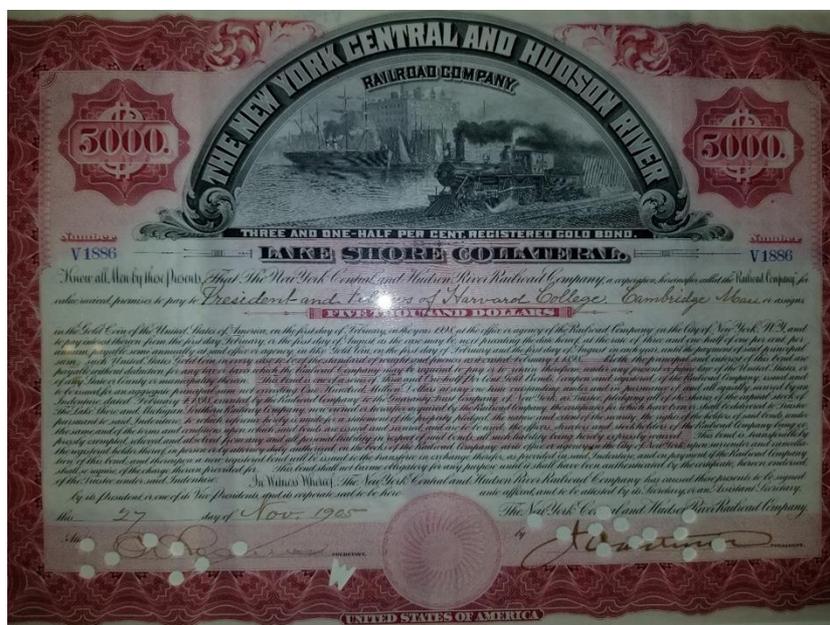
The Gold Coin Standard

“Money is gold, nothing else.”

John Pierpont Morgan

In the 19th century, bonds were gold bonds. And currencies were gold-redeemable currencies. Paper currency was useful, as it came in convenient denominations for daily purchases. Gold coin was used for larger commercial transactions. And gold offered another advantage to lenders. The quality of gold was not subject to the questions that could arise around a particular currency, especially over a long period of time.

For an example of this, let’s look at a long-term bond issued by a railroad company in 1905.



Source: Keith Weiner

A few details are interesting. The maturity is 1998 – over 92 years later. The interest rate is 3.5%. And the specification of payment in gold coin is:

“... such United States gold coin in every case to be of the same standard of weight and fineness as it existed February 1, 1898.”

They were well aware of the possibility that the definition of a US dollar could change, as could the standard size of a coin. Ninety-two years is a long time, and much could happen. So they took care of this risk with a simple clause.

Double eagle (20 US dollars), 1898



Source: NGC Coin Explorer

Or so they thought...

War and Fascism in the 20th Century

“A self-respecting, upright government should not issue irredeemable debt, which essentially is the debt that is only redeemable in irredeemable currency.”

Prof. Antal Fekete

The bond survived World War I intact. Unlike in Europe, the US government did not suspend redeemability of its currency. The bond survived the first part of the interwar period and the so-called gold bullion standard imposed across the Atlantic. Several countries attempted an adulterated gold standard, where people could not redeem notes for gold coin, but institutions could redeem big piles of notes for large gold bars.

And then in 1933, newly inaugurated President Franklin D. Roosevelt struck. America was in the depths of a depression (as was the rest of the world). People were withdrawing their gold from the banks, redeeming their paper in favor of the certainty provided by possessing the metal itself. With each redemption, the banks were forced to sell a bond to raise the gold coins. This caused the price of the bonds to drop, and hence the interest rate to rise (interest rate is the strict inverse of bond price, like a see-saw). There was a run on the banks. Banks were falling in droves.

The president thought to fix these two problems by passing a law. He made it a criminal act – as in go to prison – to possess gold. **Roosevelt made the currency irredeemable by Americans, and then promptly devalued the US dollar against gold. With gold *verboten* (prohibited), the government bond became the safest investment, for the most conservative saver.**

Let us repeat that. The Treasury bond was made, by law, into *money*.

The railroad bond – the above picture shows that the owner is the Harvard endowment fund – finally suffered losses. Let's do the math. The gold coin in 1898 was the Liberty Head double eagle. It had a face value of USD 20 and contained 0.9675 oz. of gold. Thus, that USD 5,000 bond was bought for 250 of these coins, with a total weight of 241.875 oz. of gold. Roosevelt's devaluation fixed the gold price at USD 35 to the ounce.

Harvard now had a bond worth a bit under 143 oz. of gold, a loss of about 41%.

Double eagle (20 US dollars)



What remains of the gold bond owned by Harvard

Source: NGC Coin Explorer, Keith Weiner

This was robbery plain and simple. More to the point of this story, no one would lend gold without assurance that he would get it back. Without the protection of law, there can be no such assurance. And Roosevelt had perverted the law. The law no longer protected innocent people from looters, but instead protected looters from their victims.

FDR effectively strangled the gold standard. Gold could no longer earn interest and thus stopped circulating. It was relegated to (secret) hoarding – a dry asset. However, the US dollar was still redeemable in gold by foreign governments and central banks. During the Second World War, many governments may have felt their gold was safer in New York than in their capital

cities. After the war, at least at first, they may have been happy to earn some interest on it. But by the 1960s they were redeeming their gold at an accelerating rate.

The End of Gold

“When you put out a fire, what do you replace it with?”

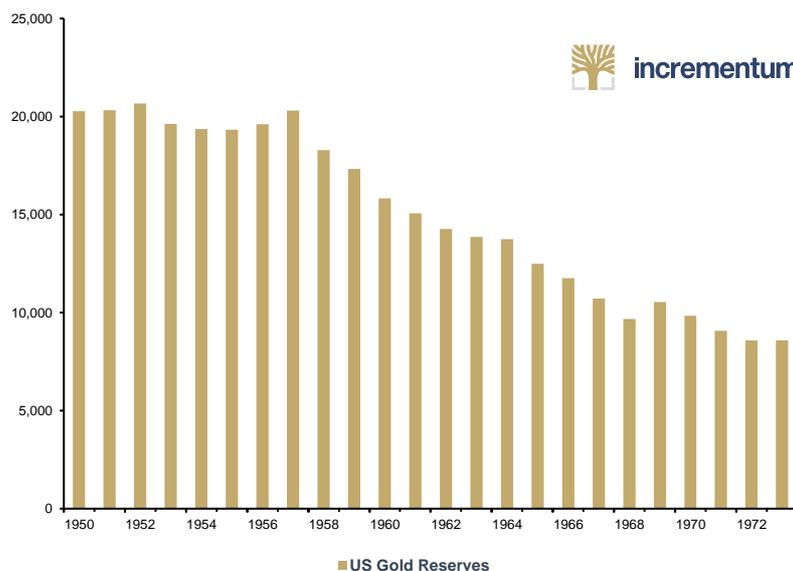
Thomas Sowell

Truth, like gold, is to be obtained not by its growth, but by washing away from it all that is not gold.

Leo Tolstoy

In 1971, Nixon faced a crisis. Only about 8,000 tonnes of gold remained in the Treasury, and European governments were redeeming their US dollars for gold at an alarming rate. In 1969, 700 tonnes of gold left the US, and in 1970 another 769 tonnes. Nixon was staring at a catastrophe: It was widely believed that the draining of the country’s gold would cause the collapse of the US dollar.

US gold reserves, in tonnes, 1950-1973



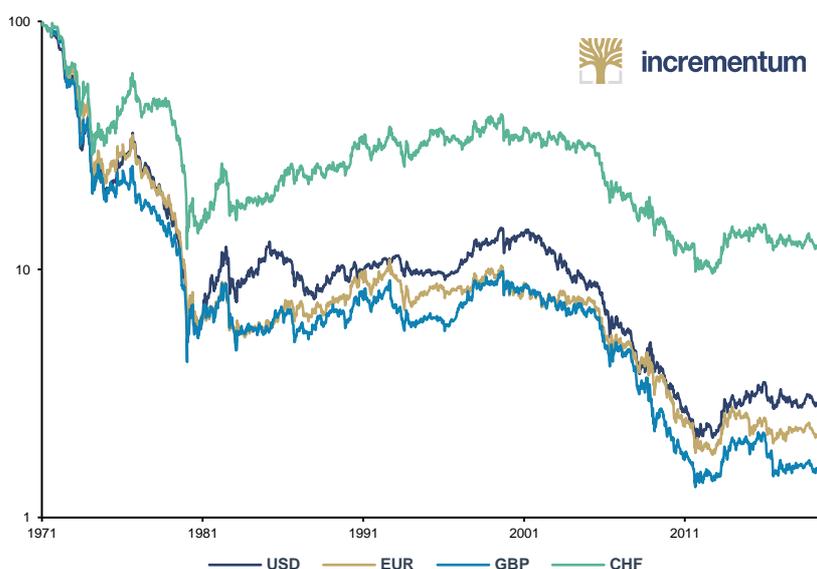
Source: World Gold Council, Incrementum AG

So he gave that infamous little speech in which he said he suspended “temporarily” the redeemability of the US dollar. He thereby plunged us into a worldwide regime of irredeemable paper currency. The US dollar itself was unmoored, and soon enough the other currencies were untethered from the US dollar. Each could begin sinking at its own rate.

“We must protect the position of the American dollar as a pillar of monetary stability around the world... your dollar will be worth just as much tomorrow as it is today.”²⁶⁶, Richard Nixon, August 15, 1971

Within a few years the US Congress relegalized the ownership of gold. There was no longer any reason to prevent people from owning it, as gold now had no role in the monetary system anymore. The dry asset for hoarding could now be traded and speculated upon (and generate income tax revenues for the government).

USD, EUR, GBP, CHF in grams of gold, 01/1971=100 (log scale), 01/1971-04/2019



Source: Federal Reserve St. Louis, investing.com, Incrementum AG

They even created a futures market for gold. A futures market is the solution to a problem inherent in agricultural commodities. Wheat and other crops are produced in an annual cycle, all at once, typically in late summer. But they are consumed evenly throughout the year. They need to be stored, and a futures market makes it possible for farmers to sell at a predictable price, for bakers and brewers to buy at a predictable price, and for warehouse operators to make a predictable storage fee without price risk. A futures market is an elegant and efficient mechanism.

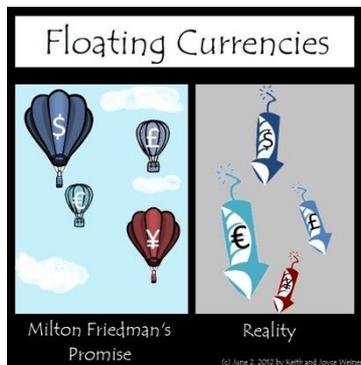
²⁶⁶ See [Speech](#) of Richard Nixon on August 15, 1971.

The Very Model of a Modern Monetary System

“The abandonment of the gold standard made it possible for the welfare statists to use the banking system as a means to an unlimited expansion of credit.”

Alan Greenspan, *Gold and Economic Freedom*

And now gold was put up on the commodities board. How absurd! Gold is not produced seasonally. Indeed, it is not consumed – that is the whole point of the monetary commodity. Virtually all of the gold ever mined over thousands of years of human history is still in human hands. There ought not to be a futures market. The futures market is a poor surrogate for a proper kind of market that deals in gold for future delivery.



The proper market for gold to be paid in the future is, of course, the gold bond market. By 1975 it had been dead for two generations, and the world created in 1975 persists to this day. Those in power at the time understood gold in its context. However, institutional memory of the gold standard faded with each new Federal Reserve chairman. Paul Volcker’s dissertation discussed the (gold) real bills doctrine. Alan Greenspan was famously an advocate of gold, in his fantastic essay published in *Capitalism: The Unknown Ideal*, by Ayn Rand, in 1967. Then we got Ben Bernanke, who had no academic or ideological interest in gold, nor any understanding. Janet Yellen was the same, and now Jerome Powell. These last three Fed chairs have grown up in a purely irredeemable world, which they regard as *normal*.

Of course, the folly and ignorance of the people in charge of the US dollar was not lost on the participants in the gold market. Starting when gold ownership was legalized in 1975 (earlier, for those who had access to London) Americans began to buy gold. Ultimately, they (and of course people all around the world) bid it up to USD 850, in 1980.

Speculation Gone Wild

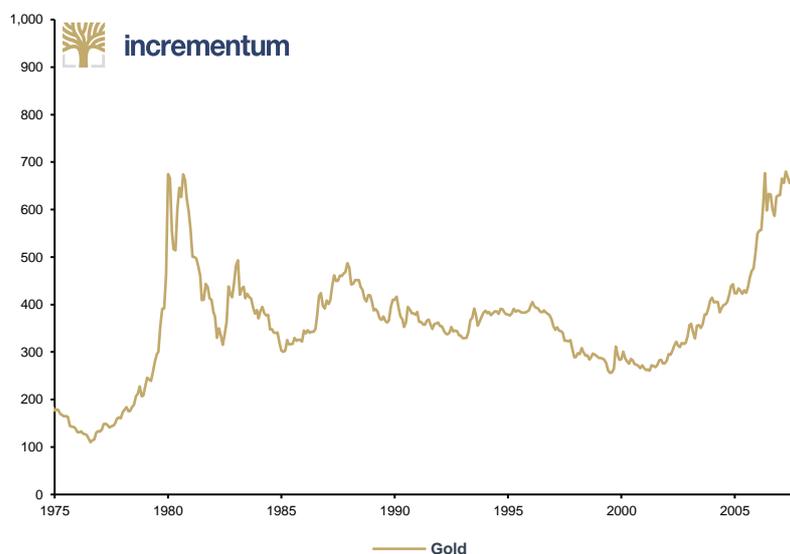
“The humblest citizen in all the land when clad in the armor of a righteous cause is stronger than all the whole hosts of error that they can bring.”

William Jennings Bryan

This illustrates a problem. When everyone knows that a thing can only go up, they buy it. At first tentatively, then aggressively, and finally using leverage (especially in the futures market). Whatever the underlying fundamentals might justify, they get ahead of them. Then they get farther and farther ahead. And sooner or later, something needs to break.

The gold price peaked in 1980 and then came down. It was not to revisit that level for decades. Meanwhile, once the rising interest rate peaked in 1981, it began to drop. And with that, confidence in the US dollar began to rise, along with the prices of all assets. People saw less and less need for gold during the long boom that followed.

Gold price, in USD, 01/1975-04/2008



Source: Federal Reserve St. Louis, Incrementum AG

More to the point of this story, gold did not have more utility as money when its price was up, or when its price was down. Either way, it was just a dry asset. Worse, one has to pay to store gold. This is not a problem so long as the price is rising, but otherwise it becomes annoying and then a pressure to sell.

And that brings us to today.

Everyone in the gold community can sense that gold will play some sort of monetary role in the future. The present arrangement was intended as a quick fix. It is not sustainable, and it is now long past its shelf life.

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

Yet, gold does not circulate today. This is despite the US Mint's stamping out as many gold coins as the market demands (by law), and several other countries, including Austria, Britain, and South Africa, doing the same. So, a lack of coinage is not the reason why gold fails to circulate. Nor is a lack of Internet-based systems for making gold payments, which are offered by several companies. There are two ways that one could conceive of gold returning to a monetary role. One, a government could pass some sort of law that fixes their debt paper to gold by some ratio. But that couldn't work, for the same reason that any price-fixing scheme doesn't work. When the market wants a different price, it will act; and no government is big enough to stop the stampede. If the people value gold above the official price, they will trade their US dollars until the government runs out of gold or declares defeat and raises the gold price.

The other way is how gold evolved to be money in the first place, and how gold evolved to be lent and borrowed: in the market.

The Gold Bond Market, Version 2.0

“Lenin was certainly right. There is no subtler, no surer means of overturning the existing basis of society than to debauch the currency. The process engages all the hidden forces of economic law on the side of destruction, and does it in a manner which not one man in a million is able to diagnose.”

John Maynard Keynes

What is interesting, is that the general price level in terms of gold is still back where it was. In other words, the change in the price of gold is equal to the change in the price of commodities or the general price level, which tells you that there’s something about gold – I’ve thought about this for a number of years and I’ve reached a blank. It’s almost as though, technically speaking, the ability of having a stable price has great value.

Alan Greenspan

Today, gold owners have no reason to let others use or even touch their gold (unless they’re selling it). Interest is the only force that can pull gold out of private hoards, out of hiding. Think about the situation personally. Suppose someone wants to borrow your gold, to buy a building and machinery and pay wages to workers. You ask how much interest he is offering. He says zero percent – but please do it to get the gold standard going.

If he offers interest, then it comes down to how much. At the right rate, you will part with your gold. And lots of other people will, as well. How much gold is raised depends on how much interest is paid. If the offering is successful, the owner of the building may be paid gold coins for the property. And the workers may be paid gold for wages. Gold may begin circulating as a medium of exchange.

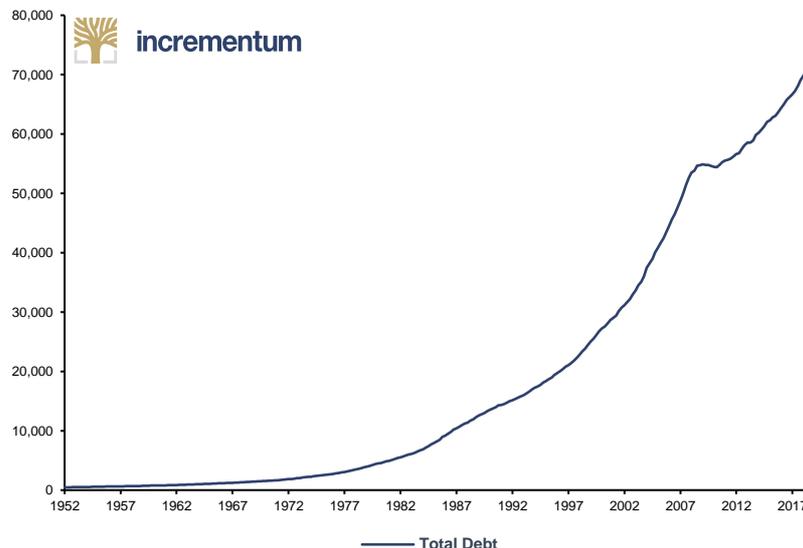
This is no mere abstract theory. Monetary Metals has already proven that gold comes out for interest. We are paying interest, and we are attracting gold to the market. So far, it’s just gold leasing to jewelers, manufacturers, dealers, and others who need to lease the metal. This may be a good proof of concept, but it’s a niche market. **And by itself it will not remonetize gold.**

However, this effort logically leads to our next step, which is the gold bond. And there is an important purpose to this. **Governments can get out of debt by selling gold bonds. Debt is the scourge of the monetary system devised by Roosevelt and Nixon. Roosevelt made the Treasury bond into the most conservative, the safest asset one could own. This is the role formerly held by gold.** Nixon made the bond irredeemable. He may not have realized (though Milton Friedman, who advised him, should have known) that this would cause debt to grow exponentially. We pay debt using US dollars, but US dollars are just a thin slice of the government bond. Which is payable only in US dollars. Which are backed by the bond. It’s circular.

The terrible consequence is that there is no extinguisher of debt. When you pay a debt using US dollars, you are personally out of the debt loop. However, the debt does not go out of existence; it merely shifts around, like a lump under a

rug. **With no way to expunge a debt from the system, and with the interest added to the debt every year, the debt must grow by at least the amount of the accrued interest. Or more, if you want what passes for growth in such a system.**

Total debt (USA), in USD bn, Q1/1952-Q4/2018



Source: Federal Reserve St. Louis, Incrementum AG

So, governments find themselves indebted. And they're trapped. The debt only grows. But the gold bond can get them out. Here's how it works. The government auctions off a gold bond. This bond is denominated in gold, with principal and interest payable in gold. And there is a twist.

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

The government does not sell the bond for US dollars. If it wants to raise more US dollars to finance its deficits, it can sell regular US-dollar bonds. Nor does it sell the bond for gold. It is not trying to raise gold (indeed it should have a gold income, from taxing gold miners). Instead there is a special auction rule. Prospective buyers should say how much of the government's existing US-dollar bonds they will return to the government. In other words, buyers of the bond will go to the market, buy outstanding bonds, and redeem them for the new gold bond.

Initially, we would expect the gold bond to exchange for paper bonds at par. If the price of gold is USD 1,300, then USD 130,000 worth of outstanding paper bonds would be redeemed for a 100 oz. gold bond. However, this exchange rate will not prevail for long.



Courtesy of Hedgeye

Let's pause and pose another personal question. Suppose you had a choice of two bonds, from the same issuer, subject to the same credit risks and with the same maturity. One promised to pay you USD 130,000 in ten years, and the other promised 100 oz. of gold. Which bond would you prefer?

A market gives people a way to express their preference. Bidders can bid more than USD 130,000 of paper bonds to get the gold bond. Every penny they go over this reduces the government's debt at a discount. This is a big benefit to any government that issues gold bonds this way.

Investors, of course, get interest on their gold. It's a win-win deal. And it opens gold to institutional investors, many of whom by charter or regulation do not buy gold metal because they don't own commodities. They don't speculate on price. A bond is a game-changer for them. Note one more benefit of this auction process. It puts a firm bid under the bonds. This means that the paper will not collapse violently, to the detriment of us all.

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

Keith Weiner

There are a few prospective government issuers, including the state of Nevada, that may issue a gold bond and realize this benefit. This state is interesting, because it has more gold mining activity than any other. And the gold bond will solve another problem for them. The income they get from taxing the gold miners is in gold, but their debt is currently in US dollars. So, when the price of gold drops, they have an unexpected budget shortfall. **Politicians may like to deficit-spend, but no one likes unpleasant surprises.**

Gold vs. Bitcoin vs. Stablecoins

“The only reason that cryptocurrencies exist is because of regulations that stop us from using gold as money.”

Peter Schiff

Key Takeaways

- Similar to gold ETFs, all of the gold-backed cryptocurrencies on the market are centralized. This means they have counterparty risk. Unlike storing your own physical gold, gold-backed cryptocurrencies require you to trust a company for storage.
- There are three main types of centralized, collateralized stablecoins: fiat, commodity, and crypto. Gold-backed cryptocurrencies are considered to be centralized and “off-chain-backed coins”. The most famous gold-backed cryptocurrency is the Digix Gold Token (DGX). DGX has a market capitalization of approximately USD 4mn and a daily trading volume of approximately USD 240,000 over the past year. Even though Digix is backed by gold, it often trades at a discount to gold, and Digix’s return is extremely volatile compared to gold’s return.
- Gold-backed cryptocurrencies have higher costs and risks than ETFs and managed gold funds. Investors can suffer loss of value due to faulty private key storage, double-spends from weak blockchain security, regulatory uncertainty, lack of liquidity, and nontransparent accounting by gold vaults.

Again, it's an area where I will be sad if our rules stand in the way of people developing a stablecoin that has investor interest that people want. So, if there are things that we need to do to adjust our rules, again, come talk to us.

Hester Pierce,
SEC Commissioner

Last year we featured an article exploring the intersection between gold and Bitcoin.²⁶⁷ The article focused on how gold impacts Bitcoin's application as a global store of value. **Now an even newer competitor to gold is emerging: stablecoins.** Stablecoins promise to improve on gold by being digital and to improve on Bitcoin by being stable. But can the companies behind these stablecoins deliver or are they just modern alchemists? This chapter gives a rundown of the stablecoin market with a focus on gold-backed stablecoins, which are in many ways similar to gold ETFs. **Bottom line: All of the gold-backed stablecoins on the market are centralized, which means they have counterparty risk. Unlike storing your own physical gold, trusting a company to store your gold is required.**

Gold and Bitcoin

Gold has fascinated mankind for thousands of years. So far, more than 190,000 tonnes of the precious metal have been mined.²⁶⁸ How much is still underground remains unknown. One thing is clear, however: The extractable quantity is finite and subject to diminishing returns. Similarly, the number of bitcoins that can be mined is limited: The mysterious inventor of Bitcoin has set the maximum amount to 21 million coins.²⁶⁹ **Unlike fiat money, gold and Bitcoin cannot be created by central banks at will in response to demand shocks.** While the average annual growth rate of the gold supply is around 1.7% with a rather small standard deviation,²⁷⁰ Bitcoin's inflation rate is currently 3.69% and on a downward trajectory.²⁷¹ As mentioned in last year's *In Gold We Trust* report, the supply of newly mined bitcoins follows a preprogrammed, transparent, and predictable schedule, which remains unaffected by fluctuations in demand.²⁷² **Their inelastic supply makes the prices of gold and Bitcoin dependent on their demand.**

The last time Bitcoin saw its 50-day moving average cross definitively above the 100-day moving average, a spot on the ledger cost about \$300. Since then, bitcoin is up 17x. It just happened again.

Bill Miller IV

Overall, the supply trajectories of Bitcoin and gold show that Bitcoin is expected to have a lower inflation rate by 2021. **Every 210,000 blocks, the reward the miners receive per block is halved.** This roughly corresponds to a four-year "half-life". Observers pay very close attention to the schedule, because the so-called "halving" is regarded as an important indicator of price movement. There is only little experience so far, since there have been only two such "halvings". But they show that the price has always risen in the months before the actual event. Specifically, the Bitcoin price found its bottom in the first bear market that came 378 days before the first halving and again in the second bear market, 539 days before the second halving.²⁷³

²⁶⁷ See "[Crypto: Friend or Foe?](#)", *In Gold We Trust* report 2018

²⁶⁸ See "[Above Ground Stocks](#)", Gold.org, January 31, 2019

²⁶⁹ In this context, we should note that the edge length of the cube that could be cast from the total amount of gold already mined is roughly 21 meters, which may have been Satoshi Nakamoto's inspiration for the arbitrary 21 million hard cap.

²⁷⁰ See "[The Bitcoin Halving and Monetary Competition](#)", Saifedean Ammous, July 9, 2016

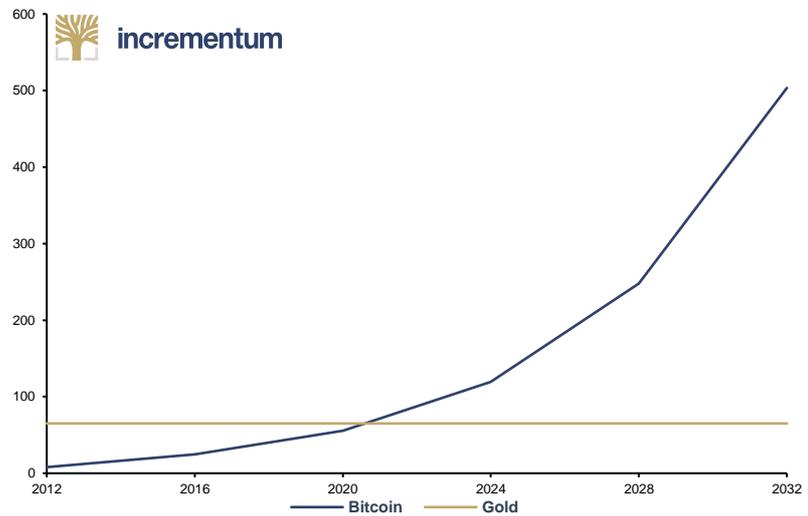
²⁷¹ See "[Bitcoin Inflation](#)", Woobull Charts, April 27, 2019

²⁷² See "[Crypto: Friend or Foe?](#)", *In Gold We Trust* report 2018

²⁷³ See [Bitcoin Block Reward Halving Countdown](#)

This equals an average of 458 days, and we are currently approximately 350 days from the next halving, which will probably take place towards the end of May 2020. **If the pattern observed so far is confirmed, the bottom should have occurred somewhere between December 2018 and May 2019.**

Stock-to-flow ratio, Bitcoin and gold, 2012-2032



Source: bitcoinblockhalf.com, World Gold Council, Incrementum AG

Stablecoins promise an on-ramp into the crypto world that a retail user can easily trust and understand, paving the way for wider acceptance and adoption of programmable money and securities. A successful stablecoin may challenge the legitimacy of the current myth of money backed by weak governments around the world.

Tatiana Koffman

When we compare the supply of gold to the supply of Bitcoin, we notice that both are being mined, albeit in their own particular ways. Gold can be found in soil, rivers, and rocks all over the world, regardless of borders. Similarly, independently of their location, Bitcoin miners receive a reward for providing the network with computing power to verify and settle transactions. **The main difference when it comes to mining is that mining is what secures the Bitcoin network and the price of Bitcoin on the market. In contrast, gold mining does not secure the price of gold. Therefore, we would like to make the subtle distinction that Bitcoin is not a bearer instrument in the same sense that gold is.** Paying with gold requires absolutely no dependence on a network for settlement. However, Bitcoin transactions can take hours to settle; and trusting the software, hardware, and internet that support Bitcoin is a type of counterparty risk even though the “party” is not human.

To make Bitcoin and gold even more scarce, a certain amount of Bitcoin and gold becomes unusable every year. Previously, gold was used in quantities that made smelting and recovery cost-effective and common. For example, the gold in your mother’s necklace may well have in it metal mined by the Romans, then used by the Tudors, etc. Now we see gold used in tiny amounts in high-tech goods, amounts that may not be cost-effective to salvage for a long time. **The British Geological Survey estimates that around 12% of current world gold production is being lost for this reason.**²⁷⁴ This means gold is being consumed in an absolute sense for the first time in history. Again, this is similar to Bitcoin’s annual loss of coins that are unspendable due to lost private keys and fat-finger mistakes while typing cumbersome recipient addresses. Two different

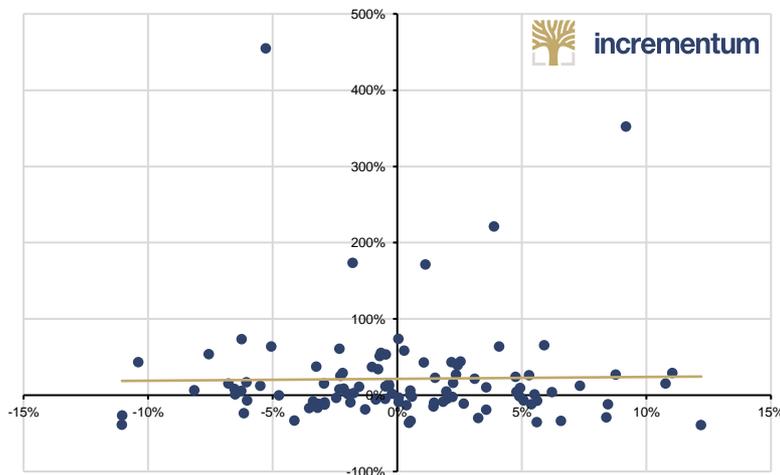
²⁷⁴ See “How much gold is there in the world?”, Ed Prior, April 1, 2013

cryptocurrency researchers, Chainanalysis and Unchained Capital, **have created an upper bound of 3.8 million for the total number of bitcoins lost.**²⁷⁵ Overall, the supply trajectories of Bitcoin and gold show that Bitcoin is expected to have a lower inflation rate by 2021.²⁷⁶

Does Bitcoin Hurt Gold?

Since many young investors consider Bitcoin to be digital gold with a payment option, some may suspect that the demand for gold is adversely affected by the success of cryptocurrencies. **As of yet, the correlation between gold and Bitcoin returns is still low and slightly positive, indicating that the demand for gold is not adversely affected by cryptocurrencies.**

Correlation of monthly returns, Gold (x-axis) and Bitcoin (y-axis), 07/2009-02/2019



Source: Coinmarketcap, Gold.org, Incrementum AG

Stablecoins are important in the same way that a bridge is important. You may not care much about the bridge, but without it, the beautiful land beyond is much harder to get to.
Erik Voorhees

This secure demand strength of gold is due to the unique advantages it has over Bitcoin. First, gold is far less volatile than cryptocurrencies and will remain so for the time being. In 2017, Bitcoin was about 15 times more volatile than gold. In addition, gold is much more liquid. On average, USD 2.5bn in Bitcoin is traded daily.²⁷⁷ This amounts to just 1% of the total gold market: The daily trading volume of gold is around USD 250bn. Furthermore, gold trades in regulated and well-established venues and has long been accepted by institutional investors as an investment alternative. This is not the case for cryptocurrencies.²⁷⁸

²⁷⁵ See ["Bitcoin Data Science \(Pt. 2\): The Geology of Lost Coins"](#), Dhruv Bansal, May 29, 2018

²⁷⁶ See [Bitcoin Block Reward Halving Countdown](#)

²⁷⁷ See [Bitcoin Trading Volume](#), Bitcoinity.org, April 27, 2019

²⁷⁸ This may change quickly, however, as more and more countries open their financial markets to blockchain-related investment vehicles. To give an example, the Liechtenstein Financial Market Authority (FMA) has recently approved three alternative investment funds (AIFs) for crypto-assets. See ["Liechtenstein gives green light to crypto funds"](#), Liechtenstein.li – official website of Liechtenstein Marketing, March 6, 2018

Leveraging Gold’s Stability

The US dollar’s hegemony is under increasing pressure from China and Russia, as US national debt reaches record highs. **Instead of returning to a gold standard in support of a fiat currency, the 21st century could witness the emergence of a gold standard involving a cryptocurrency.**

The advocates of public control cannot do without inflation. They need it in order to finance their policy of reckless spending and of lavishly subsidizing and bribing the voters.

Saifedean Ammous

The notion of a monetary system based on a cryptocurrency may be surprising, given the fact that cryptocurrencies are the most volatile asset class. Many Bitcoin holders have experienced a ride from USD 1,000 right up to USD 20,000, and then steadily back down, culminating in a long, choppy sideways market followed by the recent rally to USD 8,000. **Enter stablecoins.** Stablecoins promise to offer all of Bitcoin’s benefits while fixing the problem of volatility.

While the decentralized and independent nature of their supply makes gold and Bitcoin good stores of value, there are major differences with respect to other monetary features. Following Dobeck and Elliott²⁷⁹ and Berentsen and Schär²⁸⁰, The next table gives a quick overview.²⁸¹

Gold versus Bitcoin

Characteristic	Gold	Bitcoin
Low transaction costs	✗	✓
Fast transfers	✗	✓
Verifiability to prevent fraud	✓	✓
Confiscable	✗	✓
Divisible	✗	✓
Fungible	✓	✓
Microtransactions	✓	✗
Global Acceptance	✓	✗
Institutional Acceptance	✓	✗
Anonymity	✓	Sometimes ²⁸²
Counterparty Risk	✗	✓
Volatility	✗	✓

Source: Incrementum AG

However, the promise is most likely to be optimistic, as promises often are in the cryptocurrency space. For several decades, countries around the world have tried to peg their exchange rates to other more stable currencies. **Not a single fixed peg has lasted in the long run.**

Take for example the European Exchange Rate Mechanism (ERM), which attempted to keep the plethora of European currencies within a narrow band of

²⁷⁹ Dobeck, Mark F.; Elliott, Euel: Money. Greenwood Press, 2008, pp. 2-3

²⁸⁰ Berentsen, Aleksander and Schär, Fabian: Bitcoin, Blockchain und Kryptoassets. 2017, p. 16-17

²⁸¹ This table was inspired by a presentation given by Frank Amato at the LBMA/LPPM Precious Metals Conference 2018 in Boston, Massachusetts.

²⁸² Transfers within the Bitcoin network can be tracked indirectly due to the transparent nature of account balances. Companies such as Chainalysis offer to analyze the entire Bitcoin blockchain in order to forensically detect transfers between addresses and identify the owners of the accounts. The US tax authorities are already using this service to track cases of money laundering and tax evasion.

each other during the '80s and '90s. Since the UK could not keep their print presses turned off, George Soros and other speculators were able to mount a speculative attack and profit from breaking the peg. **This is because whenever**

a currency holds fractional reserves, arbitrage opportunities arise between it and other currencies. Therefore, stablecoins that are not fully backed are trading off between stability in the short run and blow-up risk in the long run, because keeping a fixed peg without investing in the underlying asset makes the peg fragile to black swan events.

However, Bitcoin is volatile, and many cryptocurrency users are now demanding stability. **To meet this demand, the new stablecoins are combining the advantages of gold and Bitcoin.** Gold-backed stablecoins are similar to gold ETFs. For example, the most famous gold ETF, SPDR Gold Shares (GLD), is a fund that buys physical gold and divides the ownership of it into shares.

In theory, gold-backed cryptocurrencies are supposed to work the same way. **However, there are currently no cryptocurrency exchanges that are licensed to trade tokenized ETFs.** Even if regulators eventually approve an application for such an exchange, they will require KYC/AML on each transaction.²⁸³ This begs the question: **How is a centralized gold-backed stablecoin any better than a gold ETF? We have still not found a suitable answer to this question.** In fact, the solution seems inferior at first glance, because investors still have to safely protect the private keys

that control the gold-backed stablecoins, and if the tokens are traded on a public blockchain like Ethereum, then the coins will be subject to volatile and increasing transaction fees when they send and receive the gold tokens. Then there are all of the problems associated with public blockchains, such as latency, lack of scalability, and security.

As shown on the next figure, there are three main types of collateralized stablecoins: fiat, commodity, and crypto. **Gold-backed cryptocurrencies are considered to be centralized “off-chain-backed coins” because they generate value by a counterparty’s depositing gold, gold certificates, or other gold-related securities into a vault.** Similar to fiat-collateralized coins like the infamous Tether, gold-backed cryptocurrencies are supposed to be listed on cryptocurrency exchanges so that gold positions can be opened and closed within seconds by retail and professional investors alike.

Reasons People Use Stablecoins

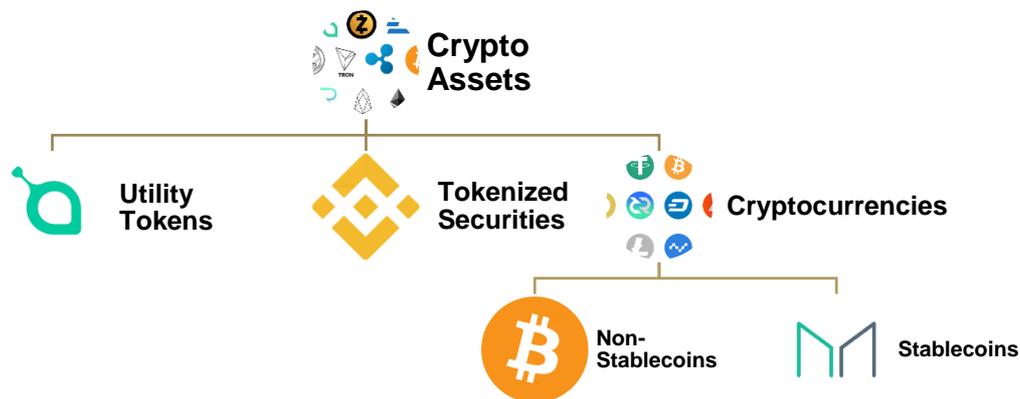
1. Exchanges: Cryptocurrency traders can reduce their exposure to Bitcoin by selling their Bitcoin for stablecoins. This allows traders to keep their wealth on an exchange without converting back into fiat. This is useful for two reasons. First, many exchanges take days to convert fiat into crypto, which means investors must wait to trade. Second, converting back into fiat means a tax bill is coming soon, since most exchange on- and off-ramps now require KYC-AML.

2. Inflation hedge: People in countries with high inflation and hyperinflation can hold on to stablecoins in order to preserve their savings. Bitcoin is too volatile for most people in Venezuela. Instead, they would prefer to hold onto cryptocurrencies backed by gold or Swiss francs.

3. Interbank settlement: Interbank settlement is a trillion-US dollar industry, as discussed in the chapter on Ripple in the June 2019 edition of the *Crypto Research Report* published by Incrementum. Instead of giving away billions in revenue to Ripple, companies such as J.P. Morgan are releasing their own centralized stablecoins backed by fiat in order to settle transactions globally on a permissioned blockchain instead of legacy banking software.

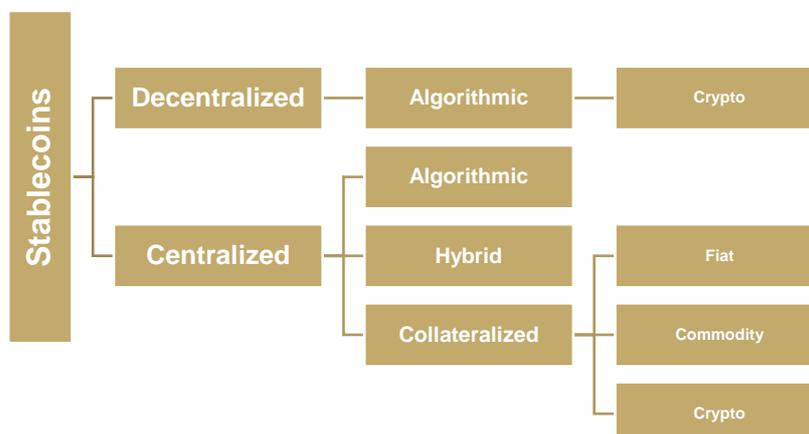
²⁸³ Know your customer (KYC) and anti-money laundering (AML) are standard protocols that require a customer to verify their identity in order to use specific services, such as bank accounts and cryptocurrency exchanges.

Topology of crypto assets



Source: Incrementum AG

Topology of stablecoins



Source: Incrementum AG

Overview of Current Gold-Backed Crypto Assets

This is why in a free market, whatever assumes a monetary role will have a reliably high stock-to-flow ratio: the new supply of the money is small compared to the overall existing supply.

Saifedean Ammous

Over 50 cryptocurrencies are somehow backed to gold. The next section summarizes just a handful of the gold-backed projects. The projects selected were drawn from responses to an official [@CryptoManagers](#) tweet on Twitter. We asked our followers what coins they wanted to learn more about. We also selected a few coins from the German-speaking countries, including Vaultoro, Novem, and AgAu. Finally, we have included an update on the gold-backed tokens that we covered last year.²⁸⁴

²⁸⁴ See "[Crypto: Friend or Foe?](#)", In *Gold We Trust* report 2018

Gold-backed cryptocurrencies*

Coin Name	Convertible into Physical Gold	Blockchain	Exchange-Traded	Fees	ICO/TGE	Stable to Gold's Price	Audited
Digix Gold Tokens (DGX)	✓	Ethereum	✓	0.13% on each trade, daily deductible demurrage fee 0.60% per annum ²⁸⁵	✓	✗	✓
Novem	✓	NEO	✗	0.05% transaction fee ²⁸⁶	✓	Not yet traded	✓
AgAu	✓	Ethereum	✗	Up to 4% on each trade plus 2% annually	✓	Not yet traded	In the future by E&Y, but not yet
AnthemGold	✓	Private Blockchain	✗	0.40% storage cost per year 3% fee for conversion to physical Gold	✗	Not yet traded	✓ ²⁸⁷
Vaultoro	✓	N/A	✗	From 0.2% to 0.5% per trade and 0.4% per year to pay for insurance, auditing and vaulting costs ²⁸⁸	✗	N/A	BDO
Ozcoin	Information not available	Information not available	Information not available	Information not available	Information not available	Information not available	Information not available
KAU/KAG	Information not available	Information not available	Information not available	Information not available	Information not available	Information not available	Information not available
Xaurum (XAUR)	✗	Ethereum	✓	Each transaction of xaurum pays a fee of 0.5 XAUR ²⁸⁹	✓	✗	✓
Zengold	✓	Metaverse Blockchain	✗	0.1% per transaction, cap 1 ZNG ²⁹⁰	✗	Information not available	✓
Flashmoni	✗	Private Blockchain	✗	Information not available	✓ ²⁹¹	✗	✓
AurusGold	✓	Ethereum	✗	Fee for tokenizing gold 0.5%, transactions 0.15%, annual fee 2% ²⁹²	✗	✗	✓
PureGold	✓	Ethereum	✓	1% transaction fee, 5% subscription fee 50% of the prevailing fees when PGT is used ²⁹³	✓	✓	✓
OneGram (OGC)	✓	Private Blockchain	✗	1% transaction fee ²⁹⁴	✗	✓	Information not available
Gold Sip	Information not available	Information not available	✗	Information not available	Information not available	Information not available	Information not available
LAPOX	✓	Public Blockchain, but not announced yet	✗	Information not available	✓	Not yet traded	In the future, but not yet
HelloGold (HGT) GBT GoldX	✓	Private Blockchain	✗	2% on each trade plus 2% annually	✓	✓ ²⁹⁵	✓

Source: Incrementum AG

*Please be advised that the table includes fees such as transfer fees, custody fees, subscription fees, and redemption fees. We included all information which was provided to us by the companies. However, a substantial cost that investors will have to bear may be the spread between the price of gold on the market and the price of gold that each company charges investors. **This markup on the price of gold is often not stated clearly in the whitepaper.** The table is not complete because the information was unavailable. Readers are responsible for their own due diligence on each firm, and this is not investment advice.

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²⁸⁵ See "Digix FAQ", Digix, February 6, 2018
²⁸⁶ See "Whitepaper v1", Novem Gold AG,
²⁸⁷ See "AnthemGold: Blockchain Gold-Backed Cryptocurrency Stablecoin?", Bitcoin Exchange Guide News Team, April 21, 2019
²⁸⁸ See "Vaultoro: The Bridge Between Bitcoin and Gold", InvestItin, March 30, 2017
²⁸⁹ See "Whitepaper 2.0", Xaurum, November 2017
²⁹⁰ See "Whitepaper", Zengold
²⁹¹ See "A guide to gold-backed cryptocurrency", Goldscape.net, April 20, 2019
²⁹² See "Whitepaper: Tokenized Physical Assets", Aurus
²⁹³ See "Whitepaper: Token Swap", PureGold, July 28, 2018
²⁹⁴ See "Whitepaper", OneGram
²⁹⁵ See "Technical Whitepaper", HelloGold, August 27, 2017

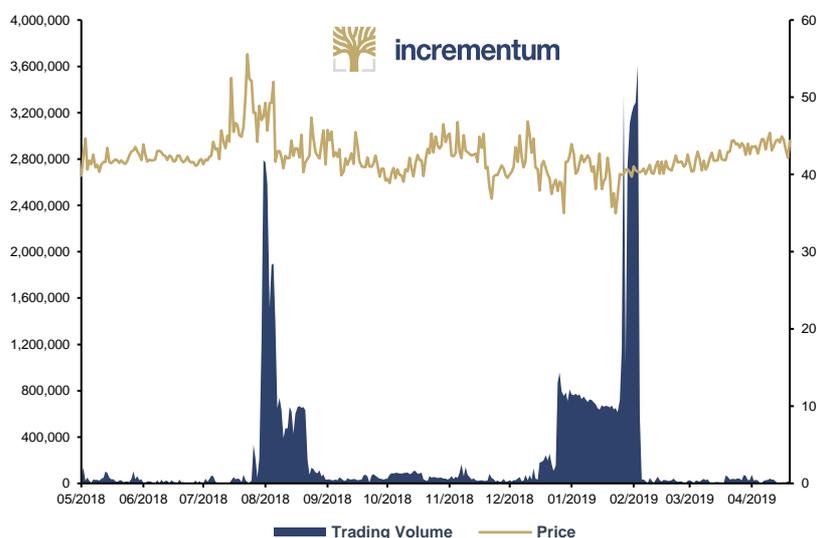
Gold is not an easily accessible option for most people, given high transaction costs involved in moving it around and the fact that the enormous central bank reserves can act as an emergency excess supply that can be used to flood the gold market to prevent the price of gold from rising during periods of increased demand, to protect the monopoly role of government money.

Saifedean Ammous

Digix Gold Tokens (DGX)

There are two tokens associated with this company: DGD and DGX. The DGD crowdsale in March 2016 was the first crowdsale and major DAO hosted on the Ethereum network. A decentralized autonomous organization (DAO) is a type of decentralized application (dApp) that allows owners to make business decisions by voting electronically, and execution of the business decisions is performed using smart contracts.²⁹⁶ The second is the DGX token, which equals one gram of standard gold.²⁹⁷ The company reportedly procures its gold from LBMA-approved refiners. The tokens are issued by Pte. Ltd. in Singapore, and the gold is stored at The Safe House in Singapore. As you can see in the next chart, the daily trading volume is approximately USD 243,000 over the past year, and USD over the past month.

Digix Gold Token (DGX), trading volume in USD (left scale), and price, in USD (right scale), 05/2018-05/2019



Source: Coinmarketcap, Gold.org, Incrementum AG

The next chart shows that the Digix Gold Token is not correlated with the price of gold. The token is more volatile and often trades at a discount to gold.

AnthemGold

What makes AnthemGold unique is that it is the first insured, fully gold-backed stablecoin based in the US. The token is open to citizens of 174 countries, and the vault where the gold is stored can be viewed on video, on the AnthemGold homepage.²⁹⁸ Currently, there are 20kg of gold there. The gold is insured through Lloyd's; there is zero FACTA reporting required for investors; and according to the founder of AnthemGold, Anthem Blanchard, the gold has zero risk of bank deposit freeze or closure. There is a 0.40% storage cost per year, extracted from metal (which is the same as the GLD gold ETF fee structure).²⁹⁹

²⁹⁶ For more on smart contracts, dApps, and DAOs, please see [Crypto Research Report, Edition IV., October 2018](#)

²⁹⁷ See "[Whitepaper](#)", Digix Global, no date

²⁹⁸ See [Anthem Gold](#)

²⁹⁹ Demelza Hays' interview with Anthem Blanchard about AnthemGold can be found [here](#).

AgAu

AgAu is a gold-backed token that is being developed by Thierry Arys Ruiz and Nicolas Chikhani, the former CEO of Arab Bank in Geneva. Their offices are located at the Zug-based blockchain incubator, Crypto Valley Venture Capital (CV VC). Their coin will be audited by E&Y and built as an ERC-1400 smart contract on the Ethereum blockchain. The gold is 1 kg LBMA bars stored at Trisuna in Liechtenstein. AgAu will be engaging in a token generation event (TGE) to raise the

initial round of capital that will be used to buy the gold required for backing the tokens. The storage fees are 0.2% per annum, and each transaction has a maximum total cost of 0.4%.

Novem

Nestled in the Crypto Rhine Valley, aka Liechtenstein, Novem Gold AG describes their token as one that embraces safety, transparency, and trust, connecting immutable blockchain technology with London Bullion Market Association (LBMA) certified physical gold. **The number one feature of Novem that distinguishes it from other gold stablecoins is that coin holders actually own the gold legally, not Novem.** Therefore, if Novem goes bankrupt, the token holders do not lose their gold. This is the only gold coin we know of that has the gold ring-fenced and protected for token holders within a legal structure. Their token, named “999.9”, builds on the NEO blockchain, and each unit is equivalent to 0.01 grams of gold. **Since the token is a regulated security token, it is subject to strict financial-market regulations.** Since February 2019, USD 1mn worth of tokens have already been purchased through private sale. The physical gold underlying the currency is stored in Liechtenstein and audited by a third party, according to Novem. **Although the 999.9 token is not yet listed on an exchange**, the Novem team says that the token will be listed on a securities token exchange. **Although no liquidity currently exists for Novem**, if liquidity develops, investors would be able to trade large amounts of gold within seconds, **similar to an ETF.** The tokens were developed by Wolfgang Schmid and Mario Schober, who are former precious metals dealers.

HelloGold

HelloGold, a Malaysian-based company founded in 2015, offers a token backed by 1 gram of 99.99% investment-grade gold. The tokens can be converted into physical PAMP Suisse gold, and the shipping is insured. The total GBT supply is limited to 3,800,000

Due Diligence on Gold-Backed Stablecoins

1. Can the cryptocurrency be converted into physical gold on demand? How easy is the process?
2. Does the company disclose how it stores the gold?
3. Who is storing the gold that backs the cryptocurrency? Is that company trustworthy?
4. Is the gold insured?
5. Does the company have a well-known and reputable auditor? If the company is not audited, then it can easily issue more tokens than gold, thereby creating fractional reserves.
6. What happens if the company goes bankrupt? Is it a limited liability company that could leave investors empty-handed?
7. What blockchain are the gold tokens built on? Is that blockchain secure?
8. Do you know how to store the private key to the wallet that controls the gold tokens? What happens if you lose the key? What happens if the key is stolen?
9. Gold-backed cryptocurrencies are similar to ETFs, which may make them subject to securities laws in Europe and the US. Is the company selling the cryptocurrency regulated? Does it store the gold in a country that has approved their token?
10. Where can the gold-backed token be traded? Gold ETFs are traded on exchanges, but there are currently no cryptocurrency exchanges that are licensed to trade tokenized ETFs.
11. How much liquidity does the gold-backed cryptocurrency have? Can you really close a position in case of a liquidity trap? The largest gold-backed cryptocurrency, Digix Gold Token, has a small daily trading volume of USD 243,000 over the past year, and USD 27,000 over the past month.
12. What is the total expense ratio for the tokenized shares of the gold fund? The most famous gold ETF, SPDR Gold Shares, has a management expense ratio (total fund costs / total fund assets) of only 0.40%.
13. What is the business model of the coin? How do the people who created the coin make money? If there is not a clear way that they are profiting, then be suspicious of indirect costs or high risk.

If you think you are too small to make an impact, try spending the night in a room with a mosquito.

African proverb

It is very difficult to determine which is a better mechanism to achieve stability but what we do know is this — the race for a truly decentralized, stable and transparent cryptocurrency is alive and well, and this will be a welcome solution to many of the problems inherent in the market currently.

Armin Schmid,
CEO Swiss Crypto Tokens AG

(representing 3.8 tonnes of gold). Users also have the opportunity to convert their gold into a digital gold token (GBT) if they have a “pro” account, which requires standard AML/KYC. This enables them to use the stored gold as a value outside the HelloGold system.

In addition, people may use their gold as collateral for loans made available by Aeon Credit Services, giving them access to personal finance. Finally, HelloGold offers a Smartphone app with which users can trade their tokens and exchange them for their corresponding shares of investment-grade gold. When they redeem their GBTs for physical gold, they receive the corresponding amount in bullion, coins, or jewelry via recorded mail.

GBT accounts are charged an annual fee of 2%. Interestingly, the HelloGold blockchain operates on a private network to reduce fees and transaction latency and avoid the risk of independent developers adding their own contracts to the blockchain. This means that HelloGold and its nodes control block times as well as the execution of the gold transactions.

Conclusion

A gold-backed cryptocurrency promises to be digital gold: no weight and stable. However, no one has figured out yet how to make a decentralized gold-backed stablecoin. All gold-backed stablecoins are centralized in the sense that you have to trust someone to store the gold for you. Similar to an exchange-traded gold fund, gold-backed stablecoins have counterparty risk. In the cryptocurrency world they say, “**Not your keys, not your crypto.**” Well, the parallel for gold would be something like, “**Not your vault, not your gold.**”

Backing a cryptocurrency in a way that an intermediary is required – a custodian or a bank for instance – actually conflicts with one of Bitcoin’s central tenets, namely, that users do not have to trust any intermediary. The security of Bitcoin and other cryptocurrencies is based on cryptographic technology. In contrast, the gold-token projects we have presented above are managed by real companies. They are responsible for the safekeeping of the gold. Therefore, the user has to trust that no state or private actor will be able to steal or confiscate the gold from the vaults.

Furthermore, the coins are often traded on a public blockchain structure such as Ethereum, which means the coins also suffer from all of Ethereum’s problems, such as scalability and security.

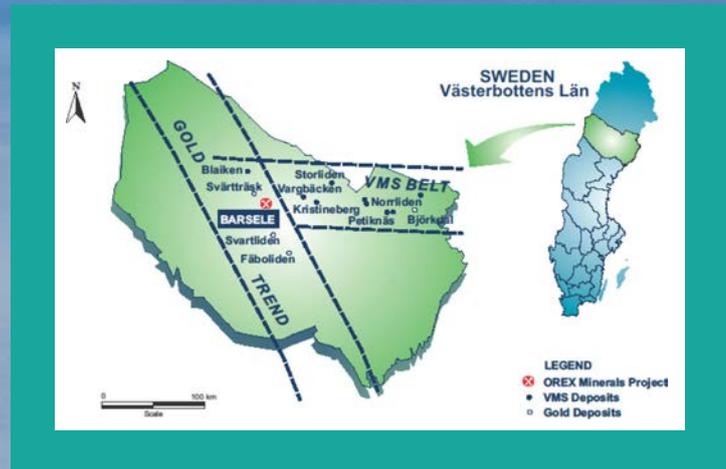
Finally, there are over fifty gold-backed coins currently, and most likely, many of them will fail. It will take a few years for the market leaders to emerge, gain widespread exposure, and thus secure the standing of gold-backed tokens as a store of value. This year will be pivotal in identifying which projects are going to take the lead in this endeavor.



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Gold and Bitcoin: Stronger Together?

“Digital gold and physical gold make a highly interesting combination as a portfolio. Excess volatility is dampened by gold, while you can still participate in much of Bitcoin’s optionality.”

Mark Valek

Key Takeaways

- The two assets gold and Bitcoin have partly similar characteristics but different patterns of price movement. In combination, volatility can be reduced disproportionately due to the diversification effect.
- A portfolio with a strategic allocation of 70% gold and 30% Bitcoin has historically had maximum drawdowns similar to gold’s (in USD), but generated significantly higher returns.
- A rebalancing strategy with broad rebalancing bands and an option overlay can further improve the risk-adjusted return significantly, and together this combination of assets represents an uncorrelated building block for a traditional portfolio.

Gold and Bitcoin – Stronger Together?

We already discussed in previous *In Gold We Trust* reports that gold and cryptocurrencies are not foes but rather complementary friends.³⁰⁰ At a philosophical level especially, Bitcoin and gold are quite similar because:

- Their stock cannot be inflated and devalued by a central bank.
- They are nobody else's obligation; thus no counterparty risk exists.
- They are easily transferable.
- They represent liquid assets outside the fiat system.

*You can't stop things like Bitcoin.
It's like trying to stop
gunpowder.*

John McAfee

In addition, both forms of investment are difficult to confiscate and have a good chance of succeeding in an environment of chronic overindebtedness, impending negative interest rates, and financial repression. To a certain degree, this also applies to other "payment tokens" or "store-of-value tokens" like, for example, Bitcoin Cash, Litecoin, or Dash.

We want to introduce a proprietary investment strategy that defuses the volatility problem or even converts it to the benefit of the investor. In order to achieve this, our strategy draws on an old wisdom in portfolio management: rebalancing. More on that later. This strategy can be implemented with gold and an index of store-of-value tokens instead of gold and Bitcoin. This would ensure that potential competitors of Bitcoin are on the radar and are in the future included in the investment strategy. For the sake of simplicity, we will examine the combination of Bitcoin and gold below.

The diversification effect

Despite their similarities, the returns of gold and Bitcoin show low and sometimes negative correlation. This situation is welcome for an investor because the fluctuations of the combined strategy are reduced.

*Gold is bitcoin without
electricity.*

Charlie Morris

Rolling correlation, bitcoin vs. gold, 2013-2019



Source: Yahoo Finance, Incrementum AG

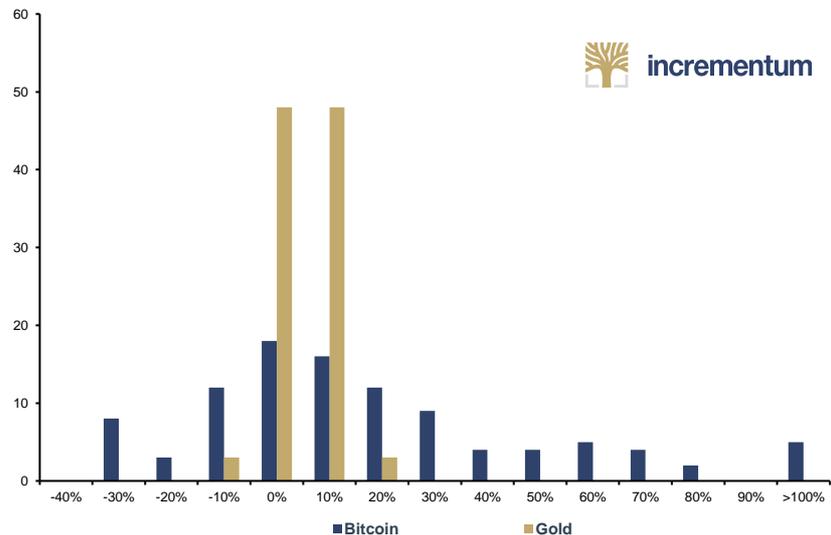
³⁰⁰ See "[Crypto: Friend or Foe?](#)", *In Gold We Trust* report 2018, "[In Bitcoin we Trust?](#)", *In Gold We Trust* report 2017

Cryptoassets are the silver bullet of diversification.

Chris Burniske and Jack Tatar

Of course, the volatility and thus the price risk of a crypto strategy will change significantly if gold is added to the investment mix. Since gold is subject to significantly lower price fluctuations,³⁰¹ overall volatility decreases as the share of gold increases.

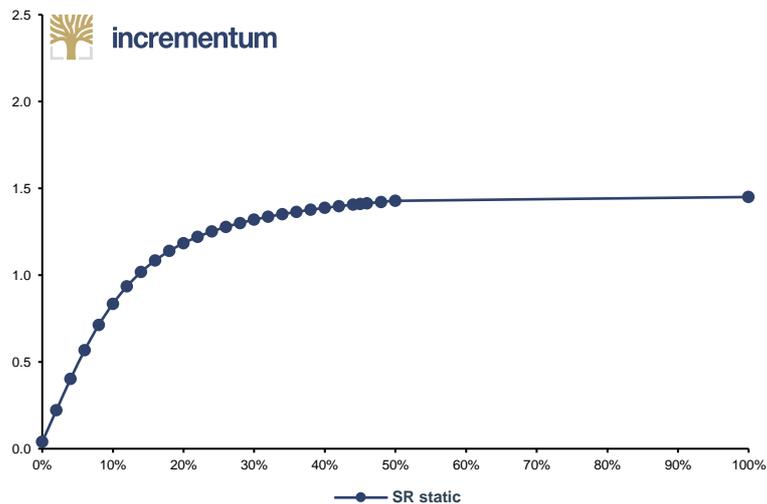
Monthly return distribution, Bitcoin vs. gold, quantity



Source: Yahoo Finance, Incrementum AG

In addition, the low correlation due to the well-known diversification effect helps to reduce fluctuations disproportionately.

Sharpe ratio of various BTC-XAU portfolios (static allocation)



Source: Yahoo Finance, Incrementum AG

³⁰¹ The long-term daily volatility of gold is around 1.0-1.5%. Depending on the observation period, Bitcoin's daily volatility is between 5 and 15%.

The Rebalancing Bonus

In addition to exploiting the diversification characteristics of gold and Bitcoin, this investment strategy benefits more than any other from the rebalancing bonus.



Mark J. Valek
@MarkValek

I like #Gold AND #BTC!

however BTC confidence (on a 10 year horizon) way overblown!
A function of current price action...

Rebalance your portfolio!



Ron Paul
@RonPaul

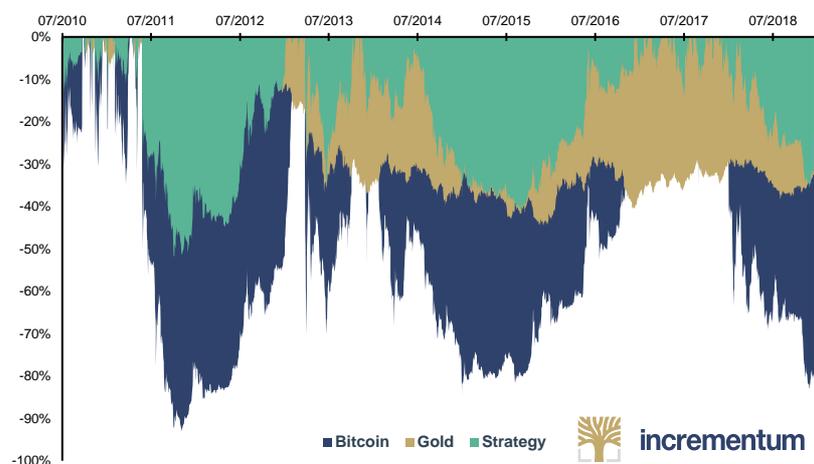
A wealthy person wants to gift you \$10,000. You get to choose in which form you'll take the gift. But there's a catch: You must keep the gift in the form that you choose, and you can't touch it for 10 years...

- What exactly is the rebalancing bonus, and what is the best way to receive it?** Price fluctuations cause portfolio components to change dynamically over time. Thanks to rebalancing, shifts in the portfolio are balanced out by resetting the portfolio to the original, i.e., the strategic asset allocation.

In order to benefit from the rebalancing bonus, a strategic allocation and a rebalancing method must be defined for both assets. For example, an investor may choose to assign as his strategic allocation 30% to Bitcoin and 70% to gold, as this mix creates an overall risk that is familiar to most investors.

This portfolio had maximum drawdowns similar to gold's (in USD), but posted a phenomenal return due to the exceptional Bitcoin performance.

Maximum drawdown of gold, bitcoin and the 30/70 portfolio, in %, 07/2010-01/2019



Source: Yahoo Finance, Incrementum AG

Different rebalancing methods

Rebalancing means restoring portfolio weights to an original allocation. In principle, there are two versions of rule-based rebalancing:

One possibility is to define a period with fixed time intervals, in which rebalancing is performed at regular dates, for example at the end of each month or quarter.

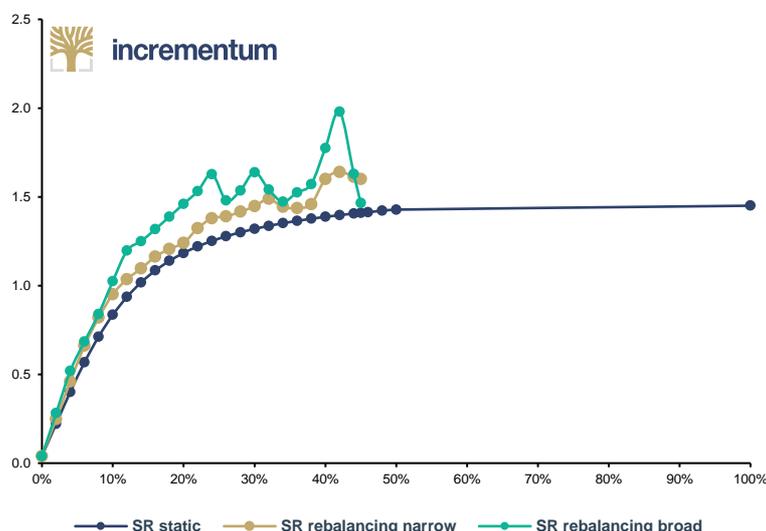
Another method is event-based, i.e. one has to determine portfolio weights that will trigger the rebalancing. In case of an overweight the outperforming asset will be sold and the underperforming asset purchased and vice versa.

As a rebalancing method, one can either set a fixed time interval or make adjustments only on an ad hoc basis when predefined portfolio shifts are reached (see info box). Our comprehensive quantitative analysis has shown that event-based rebalancing is more useful, especially considering transaction costs. In the strategy presented here, we have provided a wide range of Bitcoin allocations, from 15% to 60%. The method calls for the strategic allocation to be restored through corresponding buy and sell transactions as soon as the Bitcoin allocation due to price fluctuations falls below 15% or exceeds 60% of the total portfolio. In case Bitcoin develops better than gold, it has to be sold and replaced by gold, and vice versa.

Various studies confirm that the more the asset classes fluctuate in value and the lower their correlation, the stronger the rebalancing bonus.^{302,303} This must be taken into account against the background of the high price fluctuations in Bitcoin.

In a comprehensive quantitative analysis, we tested several variants of this investment strategy. As the graph below shows, rule-based rebalancing can significantly improve the risk-return ratio. Correspondingly, the Sharpe ratio could be consistently improved with the help of the rebalancing strategy, irrespective of the Bitcoin allocation.³⁰⁴

Sharpe ratio of various BTC-gold portfolios (static allocation & portfolio with rebalancing)



Source: Yahoo Finance, Incrementum AG

The fact that the risk-return ratio can be significantly improved with this strategy becomes particularly evident when considering the maximum drawdown as a risk.

³⁰² See "When Does Portfolio Rebalancing Improve Returns?", HodlBot, October 26, 2018

³⁰³ See "The Rebalancing Bonus", www.efficientfrontier.com

³⁰⁴ Obviously, past performance is no guarantee of future returns.

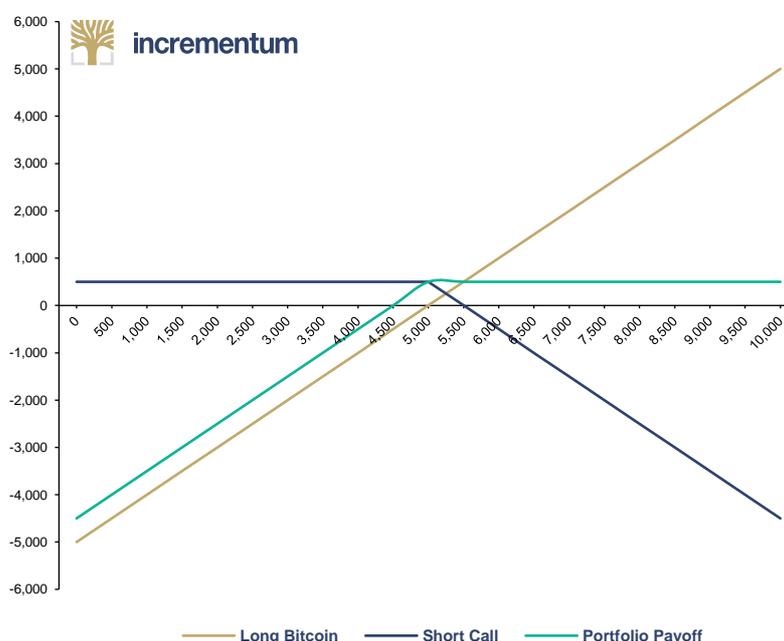
Additional Income through Covered Call Writing and Put Writing

The existing banking system extracts enormous value from society and it is parasitic in nature.

Andreas Antonopoulos

In addition to the **diversification effect** and the **rebalancing bonus**, a third element allows the investor to profit from high volatilities and thereby further improve the investment strategy. To achieve this, one uses the options market, which already exists for Bitcoin. On exchanges such as Ledger X or Deribit one can trade options for over a year. Options can be used as a speculative element, for hedging or generating yield. The decisive factor is whether you write options without holding the underlying (“naked”) or in combination with the underlying asset.

Covered call writing: Bitcoin price (x-axis), profit or loss (y-axis), in USD



Source: Incrementum AG

You don't need anyone's permission to make something great.

Massimo Banzi

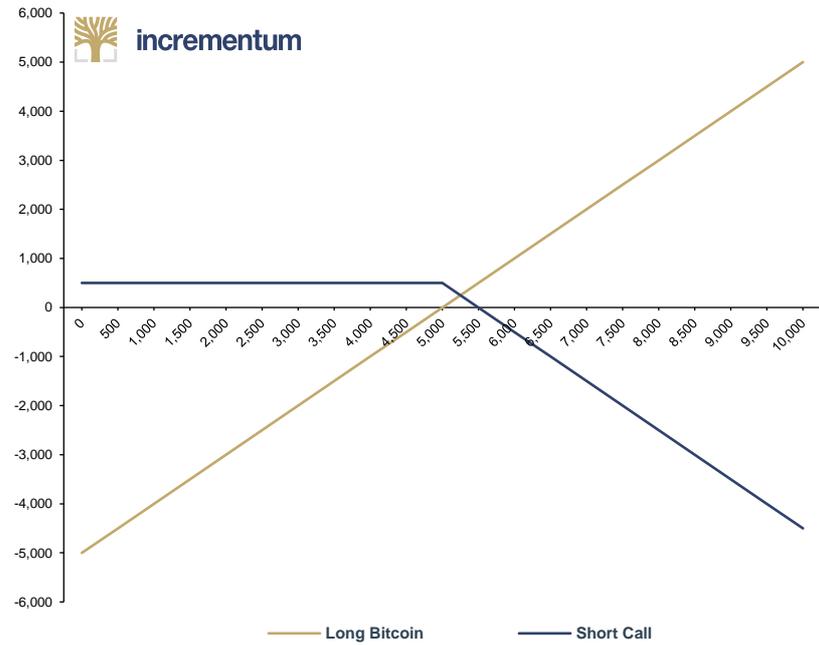
Covered call writing is a well-known strategy that can be used to exchange the upside potential of a position (or part of a position) for a premium. If you have a position in the portfolio that you want to hold or even sell, you can write a call option on it and thus generate the option premium. In the worst case, you no longer benefit from the full upside of the underlying, but at least you still generate the premium.

Bitcoin is the currency of resistance.

Max Keiser

Conversely, selling puts is a good way to build a position. In this case, a contract obliges you to buy an underlying asset at a certain point in time at a given price. In this case, you also receive the option premium for it. If you execute, you will receive a net purchase price (taking into account the generated option premium) that is more favorable than the one that you would have been able to obtain by purchasing the underlying in the normal way. If the option is not exercised due to the price movement, then you collect the entire option premium and the contract expires. The risk of this strategy is that the option is not exercised and the price later explodes.

Naked put writing: Bitcoin price (x-axis), profit or loss (y-axis), in USD



Source: Incrementum AG

The prices of option premiums are based on the expected fluctuations of the underlying assets and the volatilities implied in the option prices. As the price of Bitcoin has an exorbitantly high volatility, the option premiums are correspondingly high. According to our calculations, assigning a 10% share of the portfolio to at-the-money options would produce an annualized additional return of 10 to 15%.

Conclusion

“As a portfolio manager, when do you start advising to your clients that they have some cryptocurrency exposure? When will there be an index, a mutual fund of cryptocurrencies? It will happen.”

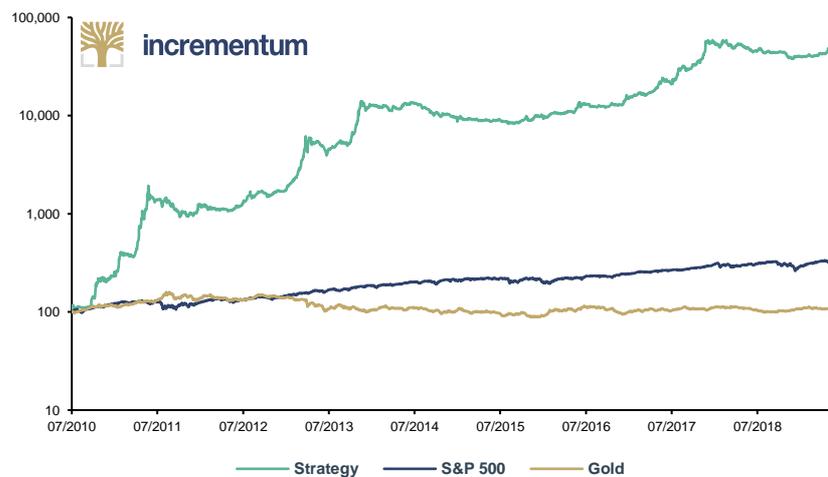
Melanie Swan

By holding dollars you are ultimately trusting politicians. By holding Bitcoin you are ultimately trusting open source code. Trust in politicians tends to fall over time. Trust in open source code tends to rise over time. And so, with time, which system likely advances?

Erik Voorhees

Bitcoin and gold are similar in certain characteristics. Forming a portfolio with these two assets offers an attractive investment strategy. By combining them, investors benefit from the low correlation of the assets. In addition, they can use the volatility of Bitcoin to their advantage through rule-based rebalancing and thus reap the rebalancing bonus. Finally, option strategies generate an interesting return through the collection of option premiums. Overall, this approach allows for a strategy that, in view of its volatility, seems to be better suited for institutional investors than highly volatile pure crypto strategies are.

Rebalancing strategy* in comparison with gold and S&P 500, 07/2010-05/2019



Source: Yahoo Finance, Incrementum AG

***Assumption underlying the calculation:** 3% total expense ratio (including trading costs). Historical performance is no guarantee of future earnings and performance. Since Bitcoin’s price appreciation in its early years is unparalleled, this level of returns should not be assumed for the future.

MUX

MARKET LIQUIDITY, LEVERAGE TO GOLD, SILVER & COPPER

Rob McEwen, Chief Owner

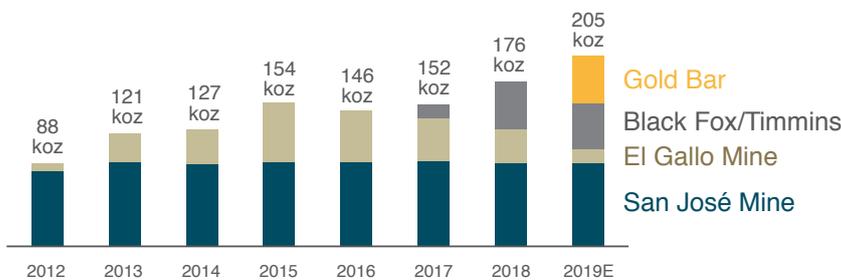
Invested \$164 M
 Owns 22% MUX
 Salary \$1 / year
 No Bonus, No Options

MUX Growing in 2 of the World's Great Gold Districts

1. Exploring & Producing - Cortez Trend, Nevada
2. Exploring & Producing - Timmins, Canada
3. Producing & Extending Mine Life - Mexico
4. Big Copper Optionality - Gold Equivalent
5. Continuing - High-Grade Production



ANNUAL PRODUCTION GOLD EQUIVALENT OZ¹



CORPORATE RESOURCE & RESERVE²

	Resources		Reserves
	Measured & Indicated	Inferred	Proven & Probable
GOLD	7.5 Moz	5.8 Moz	740 koz
SILVER	111 Moz	151 Moz	9 Moz
COPPER	10.2 B lbs	19.3 B lbs	

¹Gold / silver ratio 75:1. 2019 based on internal estimates

²For complete reserves and resources table, visit www.mcewenmining.com/Operations/Reserves-and-Resources/default.aspx

Gold Mining Stocks – After the Creative Destruction, a Bull Market?

“For the first time in my lifetime the gold mining industry has actually decided to become an industry rather than a floating abstraction. This focus on productivity, this ability to deliver economic results in 2018 combined with the expectation of performance in the mining industry, which is nil, is going to yield surprise after surprise after surprise in 2018, with damn near all of those surprises being good.”

Rick Rule

Key Takeaways

- Mining stocks tended to be weaker last year, with the usual high volatility. Relative to their own history and the price of gold, mining stocks continue to appear attractively valued.
- After several years of creative destruction in the sector, most companies are now on a much healthier footing. The recent M&A wave reinforces our positive basic assessment.
- In our investment process we are currently concentrating on high-quality producers as well as some junior explorers. If the gold/silver ratio falls, silver miners should again appear more in the focus of investors.

Where We Stand

“... companies have undergone a rapid transition from debt-fueled, acquisition-driven expansion and a ‘production-at-all-costs’ mindset, to a period of aggressive downsizing to reduce bloated cost structures and – for some – to avoid potential insolvency. After five years of restructuring, impairments, and write-downs, the industry is recovering and cash flows and profit margins are improving.”

McKinsey

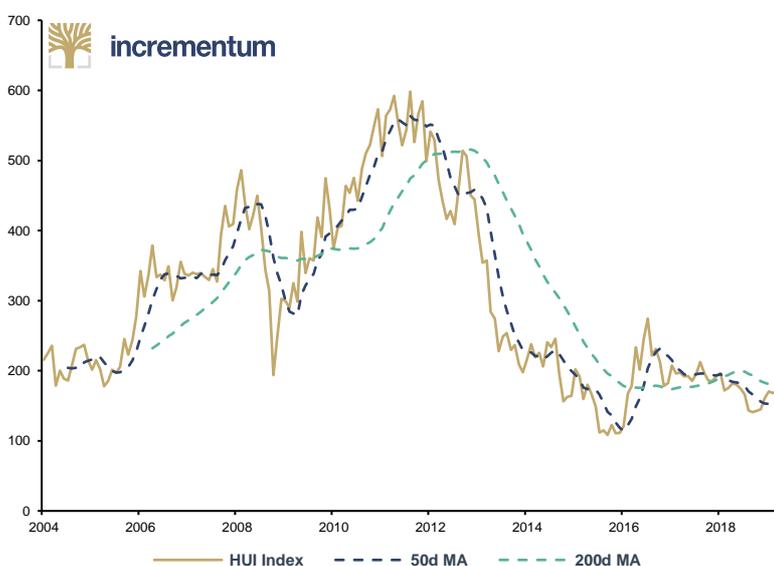
Strength does not come from winning. Your struggles develop your strengths.

Arnold Schwarzenegger

This year we have devoted considerably more attention to the mining sector than in previous years. We are delighted to present a guest contribution from our friend Mark Burrige, Fund Manager at Baker Steel, a London fund boutique with which we have recently entered into a fund cooperation agreement. We then look at two major long-term trends in the mining sector: **(1)** the growing importance of ESG and **(2)** how disruptive innovations are putting gold mining on a new footing.

Before doing so, however, we would like to take a brief look back at the most important developments of the past 12 months and assess the position of the relative valuation level of gold mining stocks. From 2011 to 2015, gold mining stocks experienced a disastrous bear market, with a total drawdown of 83%. The first strong sign of a possible sustainable trend reversal occurred in the first half of 2016, when the HUI exploded from 110 to 270 points within a few months. When our last *In Gold We Trust* report appeared, the Gold Bugs Index was at 178 points, 15% above its current level.

Gold Bug Index (HUI) and 50-day and 200-day MA, 01/2004-05/2019



Source: investing.com, Incrementum AG

I've been through a lot and I realize the future can't be controlled. I'm not worried. You can always learn to overcome difficulties.

Niki Lauda

If we look at mining stocks in relation to the broad equity market, we clearly see that the gold sector has been met with enormous scepticism since 2011. The XAU/S&P 500 ratio is currently at a lower level than it was in 2000, when the last big boom began, and at the same level as in 2016, when a 170% rally began.

Philadelphia Gold and Silver Index (XAU) / S&P 500 ratio (log), 01/1984-05/2019

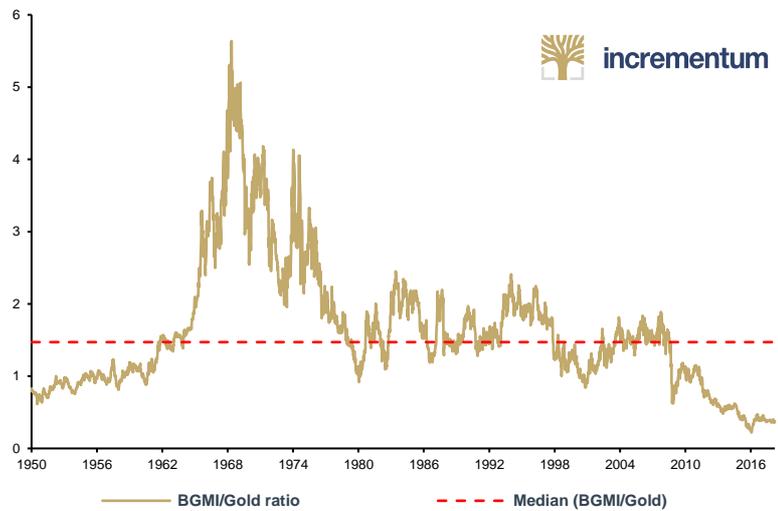


Source: Bloomberg, Incrementum AG

The extent of the underperformance becomes particularly clear when we make a longer-term comparison. The oldest available gold mining index, the Barron's Gold Mining Index (BGMI),³⁰⁵ is currently at its lowest level relative to gold in 78 years. In addition, the current value is miles below the long-term median at 1.5x.

³⁰⁵ The BGMI index can be found at <http://www.goldchartsrus.com>.

BGMI/gold ratio, 01/1950-05/2019

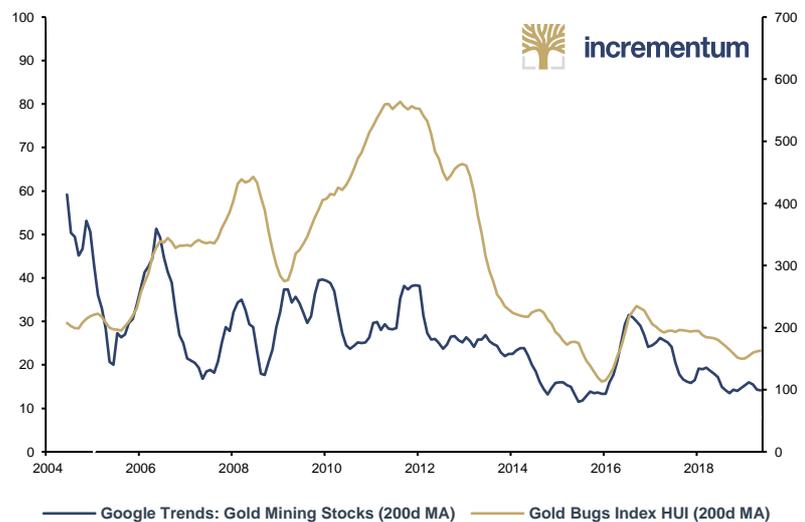


Source: Nowandfutures, Bloomberg, Incrementum AG

Interest in the mining sector seems to still be lackluster at the moment.

Google searches reveal an interest level similar to the lows in 2009 or late 2015, so the mining sector can continue to be confidently described as an exceptional contrarian investment.

Google searches for “gold mining stocks” and “HUI Index”, 01/2004-05/2019



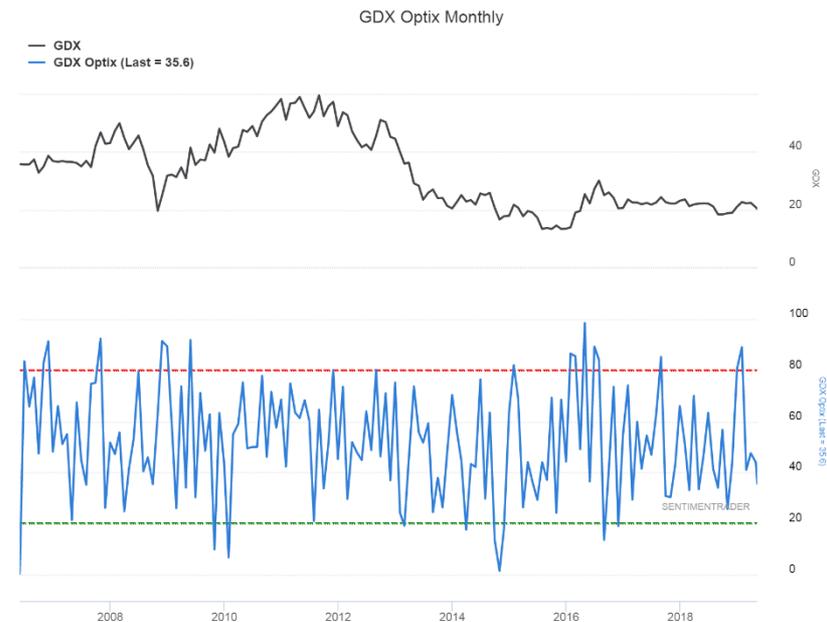
Source: Google Trends, Incrementum AG

To us, redeployment of a portion of general U.S. equity exposure to gold shares at this juncture represents a non-consensus portfolio allocation with extremely high probabilities for success.

Trey Reik

The atmosphere at mining conferences continues to resemble a birthday party at an old people’s home. This anecdotal evidence is of course also confirmed by sentiment indicators. One of our favorite indicators is Sentimentrader’s Optix Index.³⁰⁶ The chart below shows that the mood is currently comparatively negative and that a panic low was marked in the summer of 2018. With a current level of 35.6, the indicator is in the low neutral territory.

GDJ Optix, 2007-2019



Source: Sentimentrader

If we become increasingly humble about how little we know, we may be more eager to search.

John Templeton

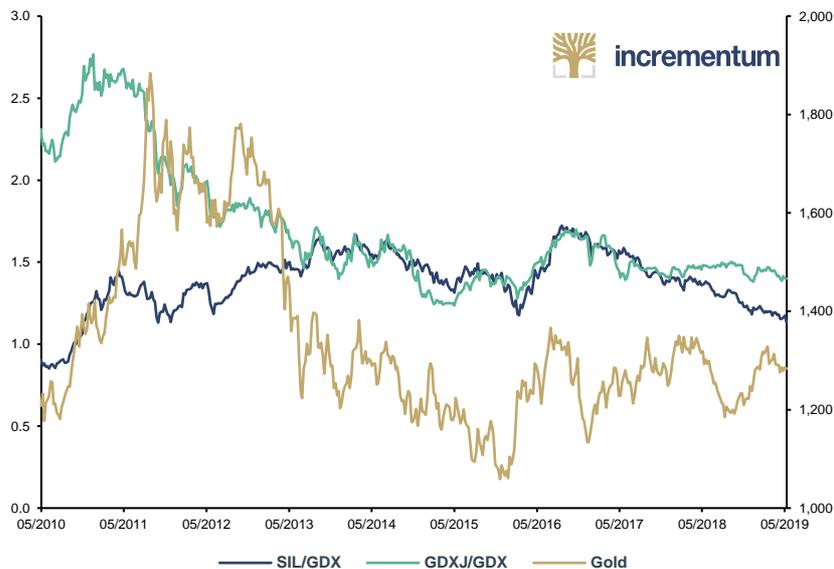
The hypothesis we have put forward in previous years is that gold bull markets must always be confirmed by mining stocks. If we now analyse the dynamics within the mining sector, it seems that risk appetite is slowly returning. The GDJ Index has shown slight strength relative to the GDX since mid-2017.³⁰⁷ If we compare silver mining stocks³⁰⁸ with the GDX, we see that there is still less momentum. **We consider a strong outperformance of the silver miners against the broad gold mining index to be a reliable trend confirmation indicator.**

³⁰⁶ www.sentimentrader.com

³⁰⁷ The GDX primarily represents large-cap gold producers, while the GDJ includes the riskier junior and small-cap stocks and has a significantly higher beta. A rise in the ratio indicates that the smaller junior stocks are showing relative strength, which in turn signals an increasing risk appetite on the part of investors.

³⁰⁸ [Global X Silver Miners ETF \(SIL\)](#)

SIL/GDX ratio and GDXJ/GDX ratio (left scale), and gold price (right scale), in USD, 05/2010-05/2019



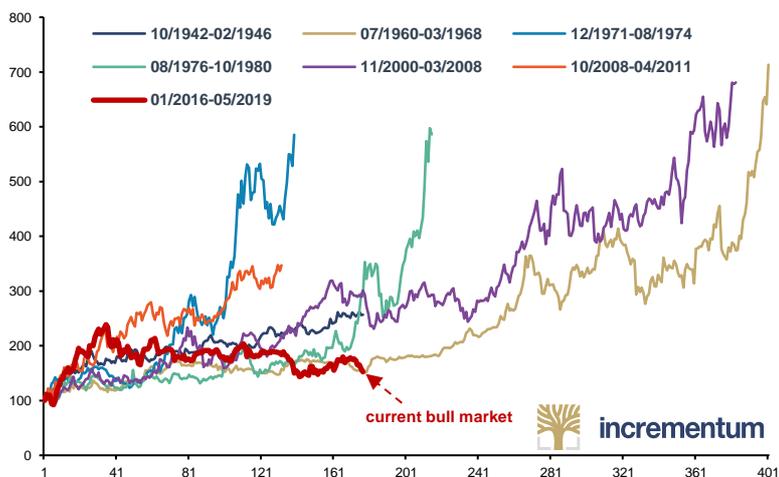
Source: Bloomberg, Federal Reserve St. Louis, Incrementum AG

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

Russell Napier

Now let's take a look at one of last year's *In Gold We Trust* report's most popular charts. The chart shows all bull markets of the Barron's Gold Mining Index (BGMI) since 1942. The current upward trend is still relatively short and weak compared to the previous bull market. If we are really at the beginning of a pronounced trend phase at the mines – as we assume – there should still be sufficient upside potential. In addition, one can see that every bull market always ended with a parabolic upward trend that lasted 9 months on average and at least doubled the price.

BGMI bull markets in comparison, length in weeks, beginning of bull market=100, 1942-2019



Source: Nowandfutures, TheDailyGold.com, Barrons, Incrementum AG

A first interim résumé is therefore that mining stocks continue to be valued extremely favorably relative to equities, gold, and their own

Whether we're talking about socks or stocks, I like buying quality merchandise when it is marked down.

Warren Buffett

The Barrick-Randgold merger represents an important strategic turning point for the sector. The rationale behind the deal is to create a merged company which will deliver shareholder returns, growing via exploration while divesting non-core assets and reducing overheads.

Metals Focus

The storms come and go, the waves crash overhead, the big fish eat the little fish, and I keep on paddling.

Varys, Game of Thrones

history and that investor interest is low. It seems that the sector is about as popular as root canal treatment without anaesthesia, freedom of the press in North Korea, or a Viennese ball without waltz music.

Fiat hedges against fiat currencies

The relative and absolute valuation of the gold miners thus appears interesting. Now signs are also increasing that the “accumulation phase” described in the “Technical Analysis” chapter is in full swing. An example of this was the recent investment by the holding company of the renowned Agnelli family, which built up investments worth USD 500mn in the mining sector over the past year. These included share packages in Harmony Gold, New Gold, and Nova Gold. The Agnellis clearly regard gold as a safe-haven investment. On the other hand, the company also wants to secure supplies of platinum and palladium, which are essential for automobile production, by acquiring a stake in Sibanye.³⁰⁹ **We interpret this announcement as symbolic of the actions of many other countercyclical and long-term (value) investors who are currently building up positions.**

But it is not only investors from outside the industry who are showing increasing interest; the propensity to buy has also risen again within the industry. Last year, we wrote at this point: “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.”³¹⁰

This assessment has proved to be spot on. According to the always readable *Gold Focus* of our esteemed colleagues at *Metals Focus*, the M&A volume last year rose to USD 12.6bn. This represents a strong recovery compared to the previous year’s USD 5.7bn. The (zero premium) merger between Barrick and Randgold of approximately USD 5.3bn was the first deal between majors since Barrick’s acquisition of Placer Dome in 2005, triggering a wave of M&A activity³¹¹ that included an all-share deal of almost USD 10bn between Newmont Mining and Goldcorp. The acquisition of Tahoe Resources by Pan American Silver and of Klondex Mines by Hecla Mining, as well as the strategic partnership between Newcrest Mining and Lundin Gold regarding Fruta del Norte should also be mentioned.

It appears that the market is largely supportive of these acquisitions, as they differ significantly in valuations from those of the previous boom. **In the boom years from 2000 to 2010, more than 1,000 acquisitions worth USD 121bn were made, and at the peak of the bull market in 2011 the figure was USD 38bn. Takeover premiums of 40-50% were quite common.**

³⁰⁹ “Exor e lo shopping di miniere d’oro, platino e palladio tra Sud Africa e Canada”, *Il Sole 24 Ore*, March 22, 2019

³¹⁰ “Precious Metals Shares – More Than a Silver Lining?”, *In Gold We Trust* report 2018

³¹¹ The failed takeover of Newmont Mining by Barrick Gold led to an innovative joint venture between the two companies in Nevada, which we will discuss further in our chapter on technology in mining.

I've failed over and over and over again in my life. And that is why I succeed.

Michael Jordan

I guess what I'm trying to say is that if I can change and you can change, everybody can change!

Rocky Balboa

Merger mania usually culminates at the end of a bull market or at the low point of a bear market. In view of the current mood and valuation situation, there is much to suggest that we are at the end of the latter. In the course of a bear market, the wheat is separated from the chaff. Now, stronger market participants are setting the course for the future bull market. **Our esteemed colleague Frank Holmes compares the wave of takeovers in the mining sector to the creative destruction that has taken place in the airline industry:**

“Look at domestic airlines. It’s easy to forget now that between 2005 and 2008, more than two-thirds of U.S. airlines were operating under Chapter 11 bankruptcy protection. A huge wave of consolidation followed, giving us the ‘big four’ carriers—Delta, American, United and Southwest. Profits surged to new highs. This year, according to the International Air Transport Association (IATA), global airlines should see their 10th straight year of profitability and fifth straight year where ‘airlines deliver a return on capital that exceeds the industry’s cost of capital, creating value for its investors.’”³¹²

The gold mining industry is currently experiencing a tidal change, which Mark Burridge of Baker Steel will discuss in detail in the following chapter. In our opinion, such an extent of creative destruction within an industry is healthy in the long term. It seems that the industry is in the process of setting new priorities. Profitability, capital discipline, and stable cash flow per ounce are now preferred over maximum gold production. **Some positive developments are mentioned below:**

- **Cost transparency:** “All-in sustaining cash costs” (AISC) have become a benchmark in the past few years and increase the comparability and transparency of the sector.
- **Write-off or sale of high-priced projects:** Numerous exploration and development projects were sold or put on hold. Balance sheets were strengthened, and USD 30bn in write-downs were made. Operating leverage³¹³ in the sector fell from 1.6x to currently 1.1x.
- **Takeovers are no longer paid in cash or debt, but mostly in own shares.**
- **Refocusing on investments in exploration:** In the previous year, there was a slight trend reversal towards increased exploration activity. In 2018, 49,312 drill holes (+14% vs. 2017) were reported from 1,261 projects (+11% vs. 2017).³¹⁴

³¹² See Holmes, Frank: “[The Newmont-Goldcorp Deal Is Positive News For Gold](#)”, *Frank Talk – Insight for Investors*, U.S. Global Investors, January 15, 2019

³¹³ Net debt/EBITDA

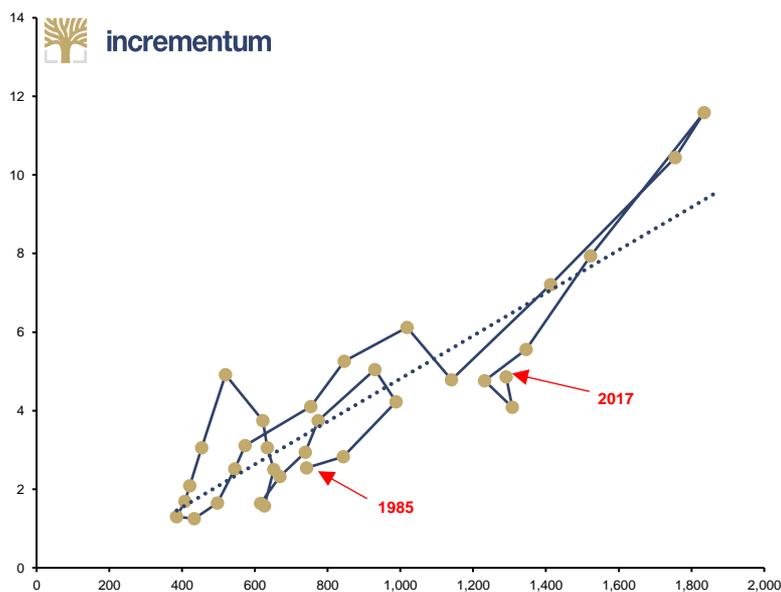
³¹⁴ See “[World Exploration Trends 2018](#)”, S&P Global Market Intelligence, March 15, 2019

The best time to get in is when exploration spend bottoms out and starts rising...Which is NOW!

Richard Schodde

“Real value is created through the drill bit” is an old saying in mining. Between 2011 and 2017, the 20 largest gold producers invested a total of USD 12.7bn in exploration.³¹⁵ However, brownfield exploration and the expansion of existing deposits accounted for a large proportion of this. **In the coming years, the neglect of greenfield exploration will take its toll.** The gradual deterioration in the production profiles of many major producers is likely to continue. As can be seen from the next chart, exploration spending is primarily a function of the gold price, with a tight correlation of 0.81.

Gold price (x-Axis), in USD, and exploration spending (y-Axis), in USD bn, 1975-2017



Source: MinEx Consulting, Richard Schodde, Incrementum AG

These are the early innings of what we believe will be a new, prolonged M&A cycle. We see tremendous potential especially in the junior mining space, given that smaller gold mining companies are trading at a material discount to larger mining companies.

Whitney George

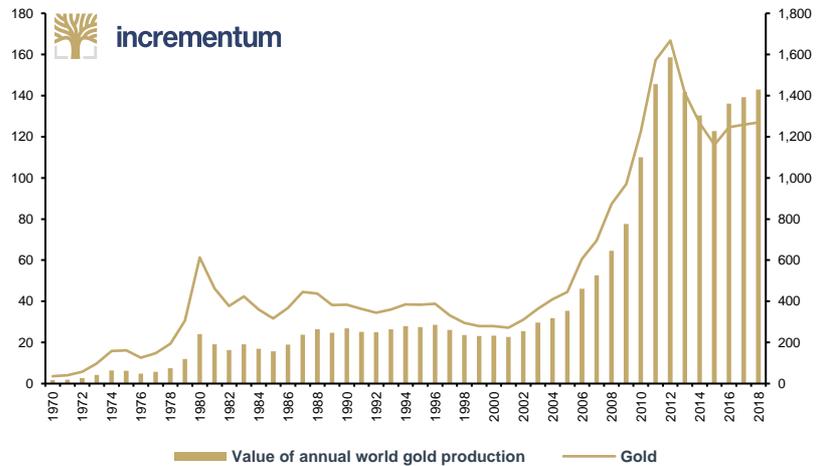
The structural change of the gold mining industry is fascinating. Even if the panic-mongering before Peak Gold seems (in our opinion) to be strongly exaggerated, structural changes within the industry are occurring.³¹⁶ The top 10 producers were responsible for only 25% of gold production in the previous year. In 2010, the figure was still 38%. Moreover, the duration from first discovery to production has further increased in recent years. **The average lead time from first targeted exploration to production was 20 years for the 40 major new primary gold mines.** On average, 13 years were spent on exploration work, while 7 years were required to establish the feasibility of commercial production.³¹⁷ **For us as investors, this results in the realization that “discovery investing” in junior explorers will become increasingly important.**

³¹⁵ See Callaway, Greg and Ramsbottom, Oliver: “Can the gold industry return to the golden age?”; McKinsey, April 2019

³¹⁶ See “Precious Metals Shares – More Than a Silver Lining?”, *In Gold We Trust* report 2018,

³¹⁷ See Callaway, Greg and Ramsbottom, Oliver: “Can the gold industry return to the golden age?”; McKinsey, April 2019

Value of annual gold production, USD bn (left scale), and gold price in USD (right scale), 1970-2018



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

Conclusion

“If life has any meaning at all, then suffering must also have meaning.”

Viktor Frankl

Gold is a current asset, with no future cash flows – it is the financial opposite of biotech. This is why gold is the ultimate loser during the growth of a credit bubble, but a sure winner when it collapses. It is why gold mining companies will go from being worth next to nothing to something, a nearly infinite percentage increase.

Daniel Oliver

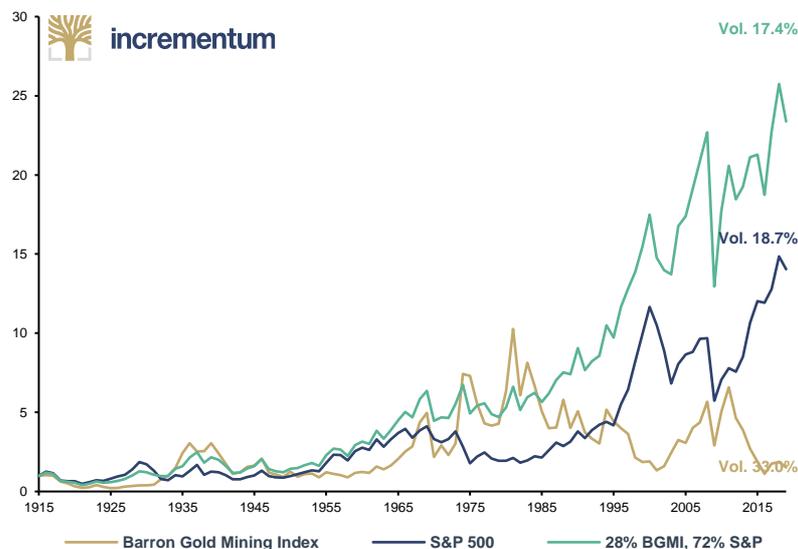
We remain firmly convinced that the four-year bear market has resulted in the majority of mining companies now being on a more solid foundation. Producers are now leaner; they have reduced their immense indebtedness and will benefit more from rising gold prices in the future.

Let’s look at the long-term portfolio properties of gold miners. Our colleague and friend Daniel Oliver (Myrmikan Research) notes that the Barron’s Gold Mining Index (BGMI) has underperformed the S&P 500 by 88% since 1915.³¹⁸ But the sudden revaluations that usually accompany the end of credit cycles often result in rapid multiplications in mine stocks. **For example, a rebalancing strategy³¹⁹ with 28% BGMI and 72% S&P 500 significantly outperformed the S&P 500, with lower volatility.**

³¹⁸ See “[Heads or Tails You Lose](#)”, Daniel Oliver, Myrmikan Research, October 11, 2018

³¹⁹ Annual rebalancing

BGMI, S&P 500, rebalancing strategy, 1915-2018



Source: Myrmikan Research, Daniel Oliver, Incrementum AG

The balance sheets and cost structures of the gold industry are much stronger than five years ago, enabling companies to pay off debt and return cash to shareholders. Growth has reappeared on management agendas and in investor presentations.

McKinsey

Amateurs bet the farm. Pros milk the cows.

Anonymous

There are currently few sectors that are more underweighted by the investment community than the mining sector. This is demonstrated by the almost dwarfish market capitalisation of mining stocks. In this respect, we expect that the mining companies – and their suffering shareholders – will reap a rich harvest in the next few years after a gruelling dry spell. **But now it is up to the industry to deliver on the promises it has made in recent years and to build new investor confidence. Currently, it appears that many companies are slowly adopting a more aggressive strategy and switching from bear market to bull market mode.** M&A but also investments in exploration and technology are particularly worth mentioning here.

Anticyclical investors will find an attractive niche in the precious metals sector over the next few years, with an excellent risk-return ratio. In our investment process, we continue to focus on high-quality producers, as well as developers and emerging producers with takeover fantasies. But even riskier junior explorers with ambitious drilling programs should be put back on the watchlist. Based on our premise that gold is now back at the beginning of a bull market, we expect a falling gold-silver ratio in the medium term. **In this scenario, silver miners could also offer outstanding investment opportunities.**

After this detailed assessment of the situation in the mining sector, we next want to focus on ESG and technology in the sector. But now, Mark Burridge of our cooperation partner Baker Steel will present his views on the most important developments and opportunities in the sector.



IAMGOLD is a mid-tier mining company with four operating gold mines on three continents. Our vision is to be the global leader in generating superior value for our stakeholders through accountable mining. This includes our Zero Harm journey: we are committed to continually strive to reach the highest standards in human health, minimize our impact on the environment, and work co-operatively with our host communities. We believe that by empowering people, we can achieve extraordinary performance.



Reform, Returns, and Responsibility

How can gold mining equities become more relevant during the next gold cycle?

“As macroeconomic factors align to drive a resurrection in gold, miners of the metal have the first opportunity in a long time to re-emerge as an investible asset class. The question is which companies are making the changes needed in the way they operate in order to generate sustainable returns?”

Mark Burridge

Key Takeaways

- The industry is becoming more investible as many companies have made meaningful changes to improve performance and returns. It won't take much more to make the industry a truly exciting investment.
- Gold producers must then draw a link (and communicate this link) between what they need to deliver to investors with how they plan, finance and run their businesses.
- History has shown that an active approach to stock selection is the key to achieving superior risk adjusted returns.



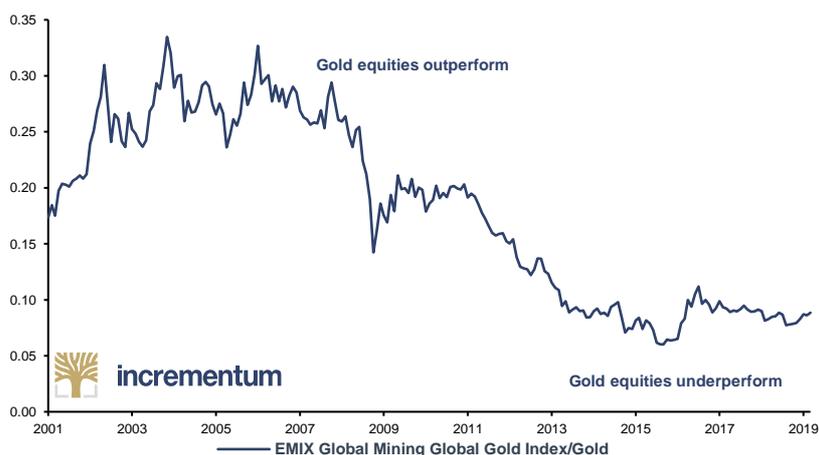
About the author: Mark Burridge is the Managing Partner at Baker Steel Capital Managers LLP, a specialist investment manager focused on the natural resources sector. Mark is the Fund Manager for an award-winning, top-performing, gold equities UCITS fund.

At the beginning of this year Baker Steel and Incrementum agreed on a collaboration which enables investors to take advantage of the macroeconomic themes developed by Incrementum through the launch in a dedicated share class of a fund managed by Baker Steel.

The gold mining sector is still emerging from several difficult years following the downturn in 2013, which saw the gold price fall by -28.0% and gold equities (GDX) decline -54.5% (in USD terms). The downturn for gold stocks was exacerbated by over a decade of poor capital discipline when, encouraged by investors, most gold miners positioned themselves as leveraged options on the gold price rather than as businesses trying to generate a return. Companies are still suffering from this hangover as they continue to live with the legacy of debt and mines and projects that have overpromised and under-delivered.

As precious metals sector specialists, we are encouraged to see signs of life returning to the gold markets and positive developments underway among the gold miners, as the industry meets the challenges to improve its relevance to generalist investors. Furthermore, producers must find a way to generate sustainable returns in a sector where environmental, social and governance (“ESG”) concerns are finally starting go beyond lip service.³²⁰

EMIX Global Mining Global Gold Index / gold ratio, 01/2001-03/2019



Source: Bloomberg, Incrementum AG

Despite the recent multi-year underperformance of gold equities relative to the gold price (with a few notable exceptions) we can remember that, when miners get it right, they can outperform the gold price, such as during the early- to mid-2000s. This period of outperformance was driven by expanding margins that in turn had been supported by several years of cost cutting and discipline in a weaker gold price environment.

However, as positive developments led to over-exuberance and the relentless pursuit of ounces not profits, gold mining equities started to underperform the gold price. In other words, the market was pricing in the deteriorating quality of the underlying businesses. **So, the challenge and opportunity for miners is now to transform themselves to once again outperform the gold price.**

³²⁰ For a more detailed analysis of ESG and its impact on the gold mining industry see the following chapter.

In response to these challenges the gold mining industry appears to be changing for the better. There have been improvements to capital discipline and more focus on shareholder returns. M&A activity is much more constructive (as opposed to value destructive) and some notable winners are emerging in this current environment through good management, sensible M&A, real financial discipline and exploration success. Despite this progress, more could be done, and we believe the first step involves companies taking time to understand why investors invest in gold mining companies and exploring how gold mining companies can improve to meet these expectations. **However, before we do that, it is worth recapping some of the recent trends in the gold mining sector.**

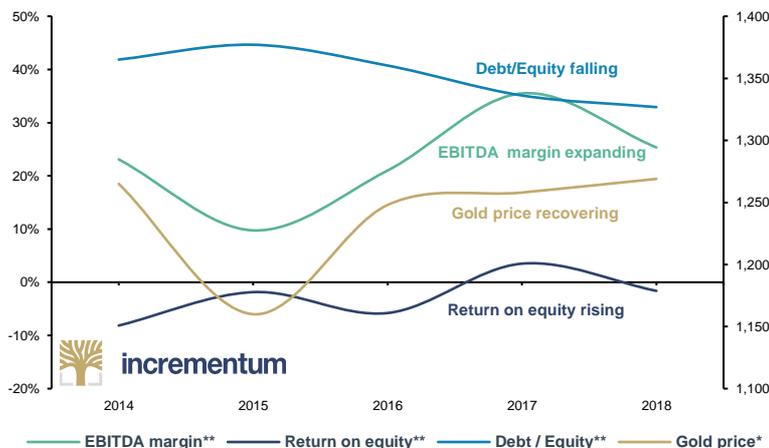
Trends in the gold mining sector

Significant reforms have been implemented within the gold industry since the sector's downturn ended a little over three years ago. In a sector which has at times been known for wasteful management practices, poor capital allocation and unwise M&A deals, resulting in value destruction for shareholders, Baker Steel Capital Managers LLP have been encouraged to see a selection of gold companies implementing much-needed reforms and a renewed focus on returns to shareholders.

M&A activity among the large-cap gold producers has been a major theme for the gold sector in recent months. The merger between Barrick and Randgold, as well as the merger between Newmont and Goldcorp have significant potential implications for the industry. The creation of the joint venture in Nevada between Barrick and Newmont has also unlocked significant value.

A wave of M&A activity in the sector would likely have a positive impact on the mid-tier producers, providing potential catalysts for the re-rating of those companies with high quality assets and effective management teams that are open to constructive deal-making. For active investment managers engaged in equity research and stock picking, increased M&A activity offers an opportunity to benefit from exposure to those companies which present attractive targets. Furthermore, large-scale M&A activity provides wider benefits for the gold mining sector, through efficiencies and attracting generalist investors. This is of particular importance at a time when rising uncertainty in global equity markets and fears of a recession in the coming years is resulting in a resurgence of interest in portfolio diversification into assets classes with low correlations to general equities and rising demand for safe haven investments.

Debt/equity, EBITDA margin, return on equity, in % (left scale), and gold price, in USD (right scale), 2014-2018



*Average gold price. ** Rolling 2-year average metrics

Source: Bloomberg, Baker Steel; gold equities represented by the FTSE Gold Mines Index; Incrementum AG

As can be seen from the performance metrics illustrated above, the gold industry has made incremental improvements since the sector’s lows in 2015, against a backdrop of a steadily rising gold price. However, beneficial reforms have not been implemented across the board, resulting in substantial disparities between the operational and share price performance of some producers. Notably, Australian producers have led the way in demonstrating improved capital discipline, with a focus on shareholder returns, and have consequently tended to generate share price outperformance in recent years.

Investment Case – Why Invest in Gold Miners?

To better assess the ways in which gold producers can improve their appeal to generalist investors it is worth revisiting the core arguments for investing in the gold sector. **We identify three reasons investors might want to invest in a gold miner.**

- Fundamentals of real value and returns
- Growth and discovery
- Option on the gold price

With the growth of ETFs and derivative products around gold bullion and index stocks, the third reason listed above is becoming less relevant as a stand-alone justification for an investment in a gold producer. **As a result, gold companies need to offer an edge through delivering real value growth and returns; only then will investors price in a value for the option they provide on the gold price.**

This in turn requires gold miners to reconsider how they understand and communicate their strategies for value growth and generating returns for shareholders.

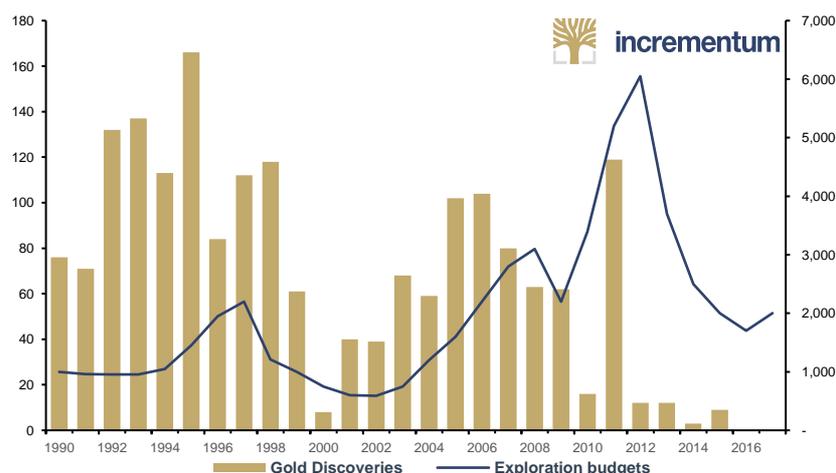
What investors are probably not looking for is a continuation of the relentless pursuit of NAV where companies use unrealistically low risk adjusted discount rates for capital allocation decisions and then value themselves on even lower discount rates and then try to justify why they should then trade at a premium to those NAVs.

As active investment managers with a value-driven investment philosophy, Baker Steel's investment team focuses on asset quality, margins and returns to shareholders. So, while NAV is a core measure of valuation, unless it can be translated into returns it is not enough.

When we invest in a gold mine we are buying its margin over the life of its reserves, so we focus on companies with sustainable margins that can grow their reserves (their 'vault in the ground') and who return a percentage of their revenue to shareholders. Overwhelmingly, most of the sector's profit comes from a subset of great-quality mines which reveal their true size over time. We would define a great mine as one that can sustain a healthy 30% margin and at the same time grow its reserves.

A mine with a 30% margin can pay its way in the world; a third of this margin is earmarked to sustain, a third to grow, and we would expect that the balancing third should be returned to shareholders. This gives us a benchmark, indicating that a well-managed profitable gold company should be able to return 10% of its revenue to shareholders. This does not mean that investors should not own companies which do not return 10% of their revenue to shareholders, however we would seek credible reasons to suggest that they will be able to without the gold price bailing them out.

Gold discoveries, in million ounces (left scale) vs. exploration expenditures, in USD mn (right scale), 1990-2017



Source: S&P Global Market Intelligence, World Gold Council, Incrementum AG

Exploration must play a key role in the future of the industry. The discovery and replacement rate is falling off as production looks set to plateau. This is profound for several reasons. It shows that new mine supply remains tight.

It also means that companies that have sustainable production and prospective ground have a big advantage and it means that discovery deserves a premium.

However, the structure and returns from the exploration end of the business remain very mixed and unclear. For example, how can we differentiate between the lifestyle juniors that seek only to mine investors versus the true exploration visionaries; how do we translate exploration spend into returns, considering the time frame and risk of finding and building a mine; and how can those exploration companies look to finance themselves properly in a fickle stock market? **So, one key starting point to answering all of this, somehow, needs to be to link exploration activity to how companies are run and deliver results.**

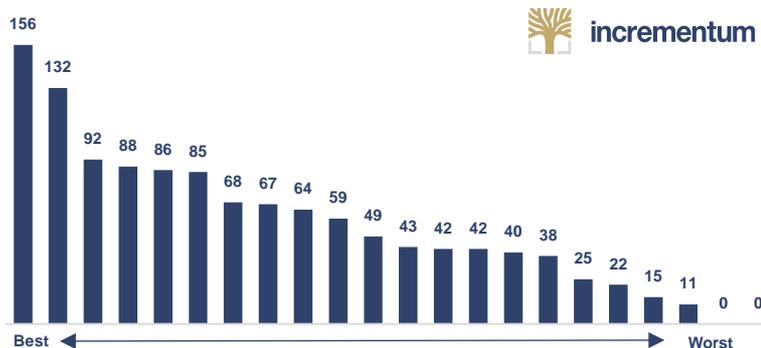
A different way of looking at returns

Investors can measure returns using two denominators, dollars or gold ounces. We are either investing in an equity based on its merits a business, in which case we must justify our investment in-line with how other businesses are measured, or we are investing in gold, in which case we should measure an investment based on how much gold we put into a company versus how much gold we actually get back as a shareholder.

The benefits for gold producers of making comparisons based on commonly-used financial metrics should be clear. For example, most investors think in terms of P/E ratios, dividends and ROE, yet mining company presentations are still predominated by references to arcane and inconsistently represented terms such as all-in sustaining cost (“AISC”), grams per ton, various different types of reserves and resources, strip ratios etc. **The result is that investors often encounter difficulties translating gold companies’ results into implications for their holding in terms of ounces, dollars and sense.**

A more profound approach is to actually use gold ounces as a yardstick, reflecting gold’s real role as store of wealth and reserve asset.

Dividends per gold equivalent produced, in USD per ounce, 2012-2018



Source: Bloomberg, company presentations, Incrementum AG

Analysis of the dividends per ounce of gold produced paid out by gold miners provides an interesting perspective on the industry. What is surprising is that with a few exceptions, investors can expect to see very little profit returned to them for each ounce mined. While this might not be surprising for a company that is genuinely in a growth phase, it is surprising that multi-mine, mature companies are not able to release more for dividends and that such big disparities exist between companies’ willingness to pay a dividend.

For example, if a company can (sustainably) discover gold for USD 50 per ounce and shareholders (sustainably) get paid USD 125 per ounce (roughly 10% of the revenue) for each ounce mined, that sounds like a positive deal for shareholders and a worthwhile business to be invested in.

These, or similar metrics, are useful to know and communicate to prepare investors for the coming gold sector bull market. Historically, as a bull market progresses investors have ended up paying for the gold in the ground so, in our opinion, today is an appropriate time to help investors understand the importance of the linkage between what is in the ground, how much it costs to find an ounce and what shareholders will get paid for each ounce mined before the bulls start running. **We believe this linkage is important for shareholders to understand for the following reasons:**

- Assuming a producer increases its inventory of reserves, knowing what shareholders have historically been paid for each ounce of production, investors have a benchmark to quickly value those additional ounces.
- If the dividend is linked to the gold price and production and therefore profits (as in the case of Polyus), then as the gold price rises this directly translates into a higher dividend income.

Transparent and simple to understand metrics in businesses where we can see profitable, sustainable growth certainly clarifies the investment decision when, as Fund Managers, we are frequently bombarded with copious amounts of information from a large universe of producers. Metrics that are simple to understand and communicate can only help clarify the investment case to a wider audience than just the specialist mining funds.

How can gold companies appeal to generalist investors?

After a few years of reform, consolidation and shifting investor sentiment, the gold and gold equities sector is positioned for recovery.

The sector is backed by a supportive macroeconomic environment, market conditions are conducive of higher gold prices, gold producers remain undervalued and with a selection of companies having undergone reforms, the potential for investors in the second half of 2019 and beyond appears substantial. With an increasingly pessimistic outlook for general equities on the back of slowing economic activity, a re-rating of the gold sector, back by robust physical demand, safe haven purchasing, and diversification appears a strong possibility.

Baker Steel believes that active management remains the best method to access the upside potential of a selection of gold producers, with the best assets, quality management and alignment of interest with shareholders until such a time as the gold miners themselves can become more transparent and better disciplined making it easier for non-specialist to find the value in the sector. Timing entry to the gold sector can be difficult for investors, yet historically a strategy of ‘averaging in’ to build a position in gold and gold equities over a few months has proven to be effective.

Precious Metals Fund (EUR), EMIX Global Mining Global Gold Index (EUR), Gold (EUR), 03/2016=100, 03/2016-03/2019



Source: Bloomberg, Incrementum AG, Active Gold Equities are represented by BAKERSTEEL Precious Metals Fund I2 EUR.

In conclusion, we highlight the following key points:

- The industry is becoming more investible and, while many companies have made meaningful changes to improve performance and returns. It won't take much more to make the industry a truly exciting investment.
- To improve their appeal, companies must first understand what all investors really want in terms of sustainable value creation and returns.

- Gold producers must then draw a link (and communicate this link) between what they need to deliver to investors with how they plan, finance and run their businesses, including baking in real shareholder returns at the planning stage.
- History has shown that an active approach to stock selection is the key to achieving superior risk adjusted returns.



To pool or not to pool? might be the question...

...but not for sophisticated and experienced mining equity investors who know that to achieve superior returns during an upcoming gold sector recovery a 'pooled' investment vehicle, such as one of the award-winning Baker Steel funds, is needed. Therefore, you can sit back and leave the hard work to the experts.

- Consistent superior risk-adjusted returns
- Track record of outperformance since 2003
- Lipper awards in 2016, 2017, 2018 and 2019; Morningstar 5 stars, rated by Citywire and Sauren
- Value-based investment strategy, managed by seasoned team of industry professionals
- Regulated fund structure with daily liquidity

***Potential for superior risk-adjusted returns relative to the sector,
under all market conditions***

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ESG: Environment, Social, Governance – Three words worth more than USD 20 trillion?

“Gold has an important role to play in managing the transition to a lower-carbon economy. Investing in gold could provide an effective hedge against the disruption and volatility that adapting to climate change is likely to bring.”

Terry Heyman, World Gold Council

Key Takeaways

- The green of the US dollar is making ESG management the top priority in the gold mining sector.
- ESG compliance improvement represents a potential financial upside for investors in gold mining companies.
- The most ESG compliant mining companies outperform the sector’s financial return benchmark.
- Gold is the most sustainable metal, as almost all the 190,000 tonnes of gold ever mined are still in use today. Investments in gold mining companies can reduce your portfolio CO2 footprint.

Introduction

“To prosper over time, every company must not only deliver financial performance, but also show how it makes a positive contribution to society.”

Larry Fink, CEO BlackRock

The mining sector has a critical role to play in the sustainability effort. We can choose whether to lead or follow in that. I believe that the leaders will be rewarded with access to finance, projects, and markets on more reasonable terms.

Tom Butler,
International Council of Mining and Metals

The optimist thinks this is the best of all possible worlds. The pessimist fears it is true.

J. Robert Oppenheimer

Until now institutional investors had only one fiduciary obligation toward their clients, which can be summarized as a duty of care and a duty of loyalty. They could invest regardless of their investment’s environmental or social impacts and governance practices. These were judged acceptable as long as they ensured alpha returns. Sustainable investment was just marginal until a few years ago, and there is still today no obligation for investors to comply with any sustainability requirements as part of their portfolio management. However, the rules are now set to be revised.

Changes have been brewing since the early adoption of the Global Reporting Initiative (GRI) in 2000, followed by the United Nations’ adoption of the 2030 Agenda for Sustainable Development in 2015, which was officialized by the ratification of the Paris Climate Agreement in 2016. **At the heart of these treaties lies a commitment to a transition to a low-carbon and climate-resilient economy.**

Since the financial sector is the most powerful lever for capital in today’s society, it is not surprising that the European Union has turned to this sector to accelerate the transition to a greener economy and has tasked it with advancing its objectives in this regard. These modifications will culminate in the adoption of new sustainability requirements for institutional investors and asset managers in the EU in the next few months and lead to the imposition of additional fiduciary duties:

*“Investment firms providing investment advice and portfolio management should **introduce questions in their suitability assessment that would help identify the client’s investment objectives, including Environmental, Social and Governance (ESG) preferences.**”*

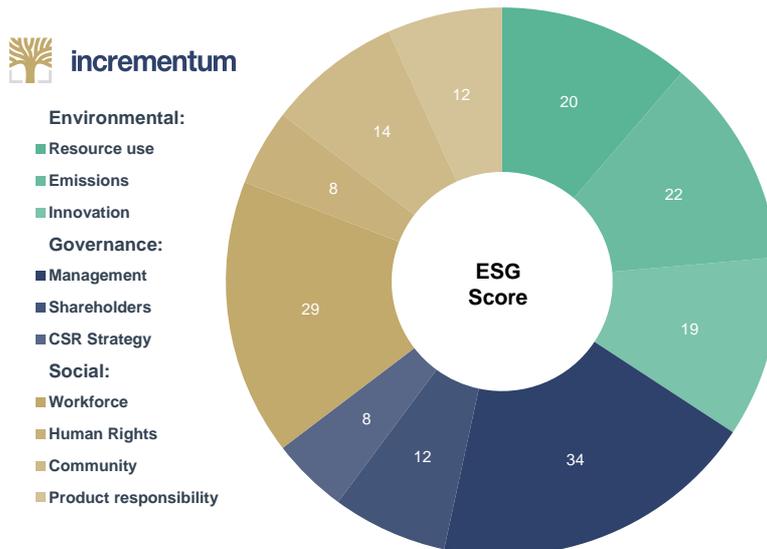
The final recommendations to the client should reflect both the financial objectives and, where relevant, the ESG preferences of that client. Investment firms providing investment advice and portfolio management should consider each client’s individual ESG preferences on a case-by-case basis.³²¹

³²¹ “Sustainability enters into MiFID II Suitability”, Deloitte – Regulatory News Alert, May 25, 2018, emphasis in original

What is ESG?

ESG stands for “environment, social, and governance”. Together they form a set of criteria used to rate a company’s operations. Each of the three factors is composed of many subcomponents, such as energy and water use, social interactions with local communalities and their workers, and anti-corruption and human rights policies. Many companies provide ESG ratings based on different proprietary rating methodologies.

ESG scoring components



Source: Thomson Reuters, Incrementum AG

ESG factors are therefore no longer regarded as mere guidelines, but are now considered to represent a material financial risk for investors, and will have a direct impact on companies’ credit ratings.

ESG-compliant investments – more than three words

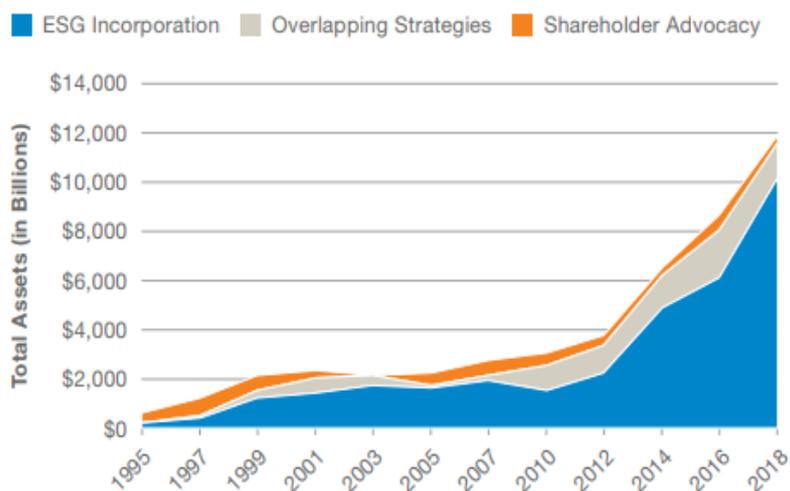
“When you take it all together, what you’re really looking at is another way of assessing a company, without looking at its balance sheet, and looking at how it impacts the broader society at large.”

Martin Kremenstein

The rise of environmentally conscious investors in the markets can be gauged by ESG’s lightning progression, from the birth of the sustainability-driven investment concept in the early 1970s to ESG-compliant investment’s guiding over USD 20trn AUM (assets under management) worldwide and around USD 12trn in the US

alone.³²² **This phenomenal growth should be seen as a driver of positive change for mining companies and used as a competitive tool by the industry to outperform other sectors and attract ESG-driven investors.**

ESG-compliant assets under management in the US, in USD bn, 1995-2018



Source: US SIF, <https://www.ussif.org/fastfacts>

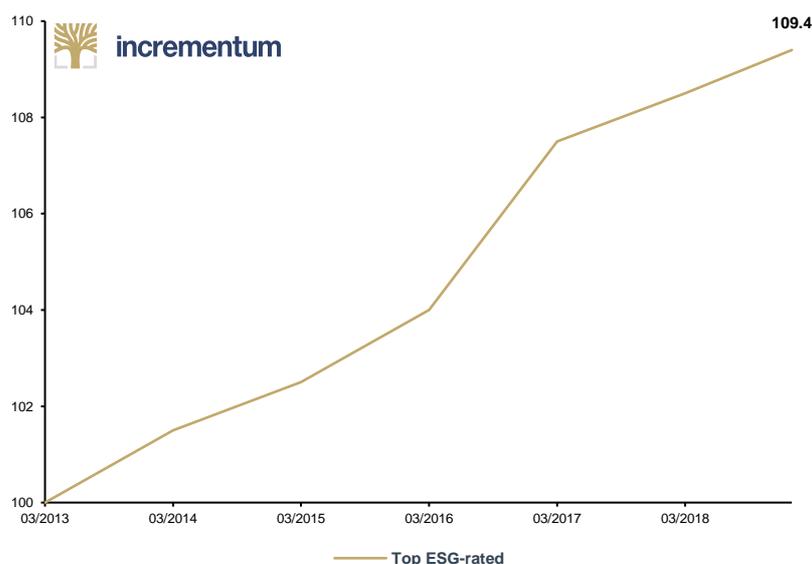
Our experience shows that active mitigation of ESG risks creates long-term shareholder value.

Namrata Thapar

The profitability of ESG-driven investments: myth or reality?

Since the creation of the first sustainability-driven investment fund, many myths surrounding the financial performance of these assets have been proven wrong. As ESG compliance data has begun to emerge, a firm conclusion can be drawn: Portfolios composed of the top 30% ESG-rated companies outperform the STOXX 600.

Annual cumulative performance: Top companies on ESG rating, 03/2013=100, 03/2013–01/2019

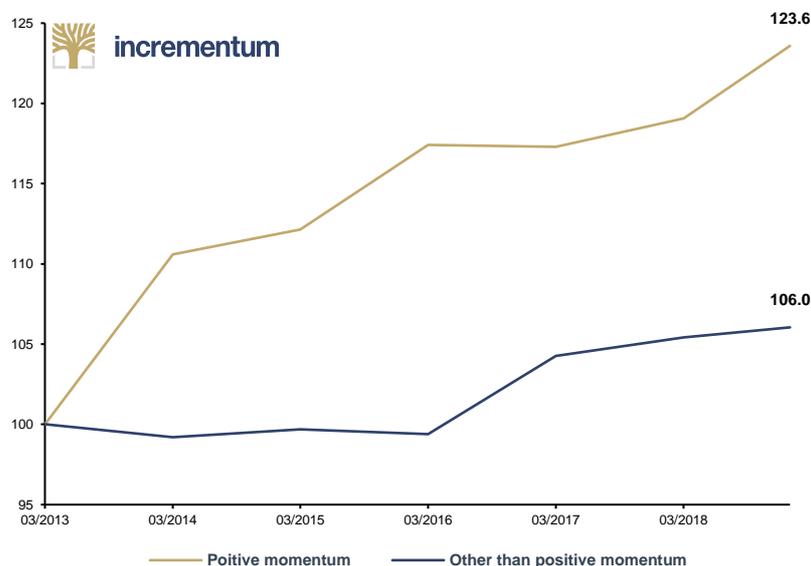


Source: SG Cross Asset Research/ESG, Incrementum AG

³²² "Report on US Sustainable, Responsible and Impact Investing Trends 2018", US SIF, no date

Investing in best-in-class ESG-rated companies can provide investors with alpha returns.

Annual cumulative performance: Positive momentum companies vs. other than positive momentum companies, 03/2013=100, 03/2013–01/2019



Source: SG Cross Asset Research/ESG, Incrementum AG

Moreover, according to a study by Societe Generale, companies that continuously improve their ESG ratings outperform the top 30% ranking ESG companies.³²³ **Transitioning from a company culture with a low priority for ESG risk management to one assigning a high priority to it can unlock tremendous potential for investors.**

ESG performance and the gold mining industry

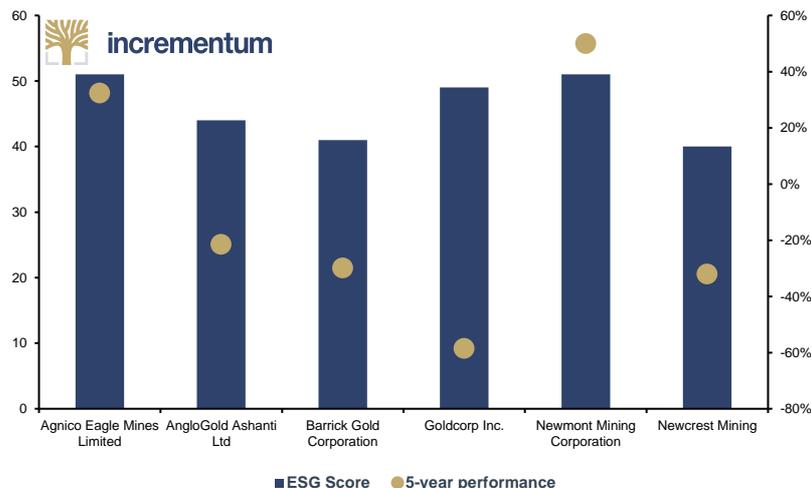
Looking at the available ESG ratings of 6 of the top 10 gold producers, the same conclusion can be drawn. The best-in-class ESG-rated gold mining companies financially outperformed their lower-rated peers in the past 5 years. Specifically, Newmont has outperformed all its peers both in ESG ratings and in terms of financial performance. This is no surprise, as Newmont is at the forefront of ESG-related initiatives. In Nevada they reduced freshwater usage of 125 million gallons at their Pete Bajo mine with the construction of a new pipeline. They also have the objective of reducing their greenhouse-gas emissions by 16.5% by 2020. Being a leader in ESG compliance has helped make Newmont a leader in financial performance, too.

Demonstrating good ESG is increasingly seen as vital to securing investment in mining projects – particularly traditional equity financing from public markets and alternative financing from offtakers, private equity and multilateral and bilateral financial institutions and contractors.

Jonathan Brooks

³²³ Agarwal, Nimit und Ouaknine, Yannick: "ESG Rating and Momentum", Harvard Law School Forum on Corporate Governance and Financial Regulation, March 21, 2019

ESG ratings (left scale), and 5-year financial performance, in % (right scale), 2014-2018



Source: CSR Hub, Incrementum AG

It's not just equity investors that want to see more movement on ESG topics, but the debt providers and even the banks providing the credit facilities for the mines.

Matthew Keen

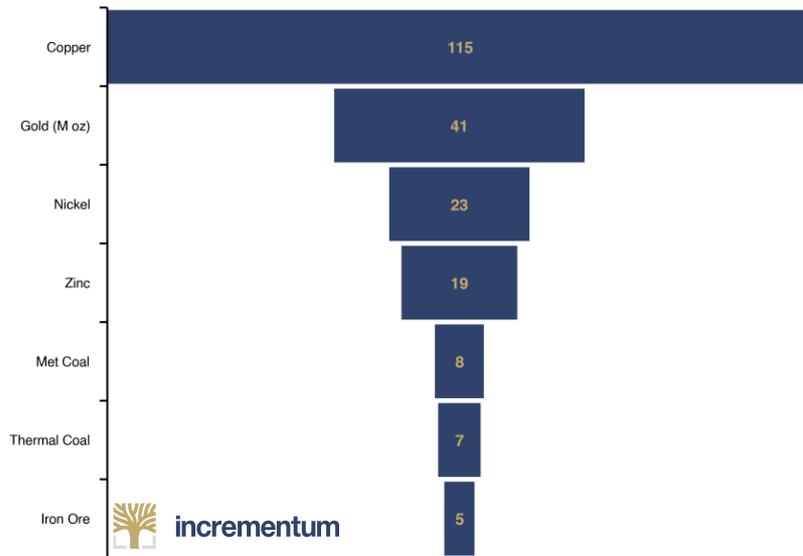
The desire of gold is not for gold. It is for the means of freedom and benefit.

Ralph Waldo Emerson

ESG compliance has a lot to offer gold mining investors. ESG-compliant companies are proven to foster better financial performance than non-ESG-compliant companies. As the mining sector has failed to generate positive cumulative returns in the past few years, and since gold mining companies have generally low ESG ratings compared to other sectors, investors may expect gold producers to jump on the ESG train and use it to their advantage in order to generate higher returns in coming years.

Finally, as gold miners operate in a capital-intensive industry, it is of the utmost importance for companies to ensure that they have access to the cheapest capital possible. As ESG scores become an important part of their credit ratings, it becomes essential that mining companies make ESG compliance a top priority. This will help them not only achieve better returns for investors but also facilitate their access to much-needed capital.

Committed and still-required capital required to meet 2028 metal supplies, in USD bn, 2019



Source: woodmac, Incrementum AG

The road to ESG-compliant gold mining

“Not only must resource development be sustainable, but it must provide opportunities to for communities to partner and participate in the building of wealth. In fact, that is the best part of what we do-working together with people and communities and watching them grow and prosper alongside us.”

Sean Boyd, CEO Agnico Eagle

It is not enough just to focus on the risks, you also have to identify the opportunities associated with ESG.

Anders Thorendal,
CIO of the Church of Sweden

The road to compliance will not be easy for gold mining companies.

Out of the many issues relevant to ESG compliance, we want to discuss

two in greater detail: energy use and site remediation. It is no secret that mining is an energy-intensive industry. The source of that energy has to be taken into consideration for ESG compliance as well as for the calculation of CO₂ emissions. Securing renewable sources of energy should therefore be at the forefront on the road to ESG compliance. The other major problem that will require the industry’s full attention is the remediation of old mining sites. A high ESG compliance rating cannot be achieved without giving particular care to the remediation phase. This will help companies secure good relationships with stakeholders during the exploration and production phases. It will also help them or others to continue operations in the localities concerned.

The reduction of renewable power costs and the prospect of more reliable power supply will be the key drivers of the shift away from traditional fuel sources to renewables among miners, ahead of ESG concerns.

Fitch Solutions

As we develop resources in Nunavut it is critical that we constantly strive to be more cost effective but also to be more energy efficient. We are currently working on several initiatives to develop renewable energy sources, like wind farms, to reduce green house gas emissions. These initiatives are not only focused on cleaner and cheaper sources of energy for our mines but also to make these new energy sources available to the people and communities of Nunavut.

Sean Boyd,
CEO Agnico Eagle

Clean energy sources, a priority

Energy provides the best opportunity to positively impact ESG ratings as well as decrease operational costs for gold mining companies active in remote locations or unsafe jurisdictions.

As energy accounts for up to 54% of total operating cash costs in the mining sector, companies are predictably using their capital or issuing specific ESG-compliant bonds in order to fund the construction of partly or fully autonomous, independent renewable-energy grids. These networks will help them meet their intensive energy needs and enable them to accelerate their migration to operations with lower carbon-emission footprints. Mining companies will distance themselves slowly but surely from fossil fuels, even though they presently account for more than 50% of their energy mix. Natural gas and propane account for 12%, coal for 9%, and grid electricity for 33%. As new gold mining projects will pass through ever more demanding permitting processes, minimizing fossil fuel usage in the energy mix as well as not relying on the existing electricity grid will represent a major commitment to sustainability.

Walking the energy walk

Mining companies are no longer theorizing about the future of renewable energy in their energy mix but are starting to implement it all over the world in existing operations. Mines located in remote locations are the biggest beneficiaries of these changes, as they are faced with expensive and unreliable energy supplies.

One example is Resolute Mining, which will build a new hybrid heavy fuel oil (HVO) and solar power plant that will generate energy costs savings of close to 40% compared to current expenses at its Syama gold mine in southeastern Mali, savings that amount to USD 0.20-0.24 per kWh.³²⁴

Another example is Rio Tinto's Diavik mine in the Canadian Northwest Territories, which since 2002 has relied on its own wind farm for around 10% of its total energy consumption. The system was installed for a total cost of USD 32mln. Presently, it provides more than 50% of total energy used, enough for the entire underground operation. The company's first five-year results combine a positive impact on ESG risks with a positive return on investment.³²⁵

³²⁴ See "New 40MW Solar Hybrid Power Plant for Syama Gold Mine", Resolute ASX Announcement, November 26, 2018

³²⁵ See Rio Tinto: "Diavik Diamond Mine – 2017 sustainable development report"

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

Solving the remediation puzzle

Another important issue regarding ESG compliance of mining activities comes to the fore once a mine's life is over. In view of the huge cost of cleaning up past operations, mining companies predictably try to divest or sell assets on the verge of being decommissioned. A major part of the negative perception of the mining sector stems from depleted mining sites having been abandoned without remediation of any kind.

As environmental permitting for new projects is becoming more complex and stakeholders are more organized and mobilized than ever, tremendous pressure is put on gold mining companies to apply best practices to their planned mine-site remediation efforts. Mining companies with a priority on mitigating ESG risks will bear the costs related to remediation, but will also have the opportunity to commit themselves to mitigating the environmental and social impacts of mining and to creating a positive experience for local communities after the life of a mine ends.

Since 2016, Newmont Mining has raised site remediation from a mere objective to a priority. The company has incorporated reclamation targets into its annual incentive compensation plan. Bonuses are paid according to the fulfillment of objectives on the hectares to be reclaimed. These bonuses are also adjusted positively or negatively according to the year-end results of reclamation.³²⁶

In southeast British Columbia, a mining company participated in the construction of a solar-cell micro plant by supplying its reclaimed mining land plus the site's infrastructure as well as partial financing. Today this solar plant provides electricity for more than 200 homes.³²⁷

ESG compliance gone wrong

One example of ESG risk mitigation failure is that of Vale SA mining company. In an initial incident in 2015, the company's Samarco Dam near the city of Mariana failed. The dam was part of a joint venture with BHP and not under Vale's operational control. However, even after this event, which caused irreparable damage to the environment and killed 19 people, Vale enjoyed a top-tier ESG compliance rating.

³²⁶ "Beyond the Mine – Our 2015 Social and Environmental Performance", Newmont Mining Corporation, no date, p. 55

³²⁷ "This Old Mine Is Now B.C.'s Largest Solar Farm", *The Narwhal*, March 29, 2017

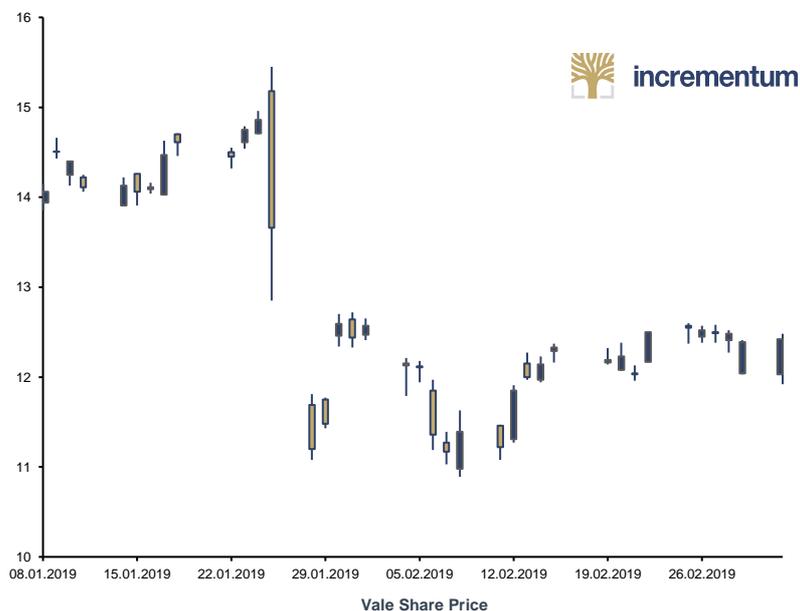
Vale historical ESG rating, 2014-2019



Source: Yahoo Finance, Incrementum AG

Then, on January 25, 2019, Vale’s Fundão tailings dam collapsed. Following this second accident the company’s ESG compliance rating was downgraded and its share price collapsed by more than 25%.

Vale’s historical share price, in USD, 08/01/2019-04/03/2019



Source: Yahoo Finance, Incrementum AG

The incident prompted the imposition of USD 3bn in fines; access to funds was blocked; and Vale’s dividend distribution was suspended. Eight Vale employees are facing criminal charges; operations at two Vale complexes have been suspended; and construction on thirteen dams has been halted. The Brazilian government is even talking about selling its shares in the company.

Gold opens all locks; no lock will hold against the power of gold.

George Herbert

Vale's ESG ratings were subsequently downgraded, and investment funds are divesting their shares as a result. The São Paulo stock exchange has removed Vale from its ISE sustainability index. The company's CEO has stepped down, and civil society organizations are demanding Vale's expulsion from the United Nations' corporate responsibility pact. The total costs of the tragedy are not yet accounted for: Vale will face billions of dollars in remediation costs, write-offs, higher refinancing costs, and risk-provision costs.

Thus, an accident can not only have a major short-term impact on a company's share price but may also have long-lasting effects on its reputation and profitability.

In short, even companies with the highest ESG compliance ratings are not immune to accidents. When such events occur, companies may see a large part of their market capitalization vanish overnight. **However, companies that are successful at mitigating ESG risks will be highly rewarded, as they might benefit from fund inflows.**

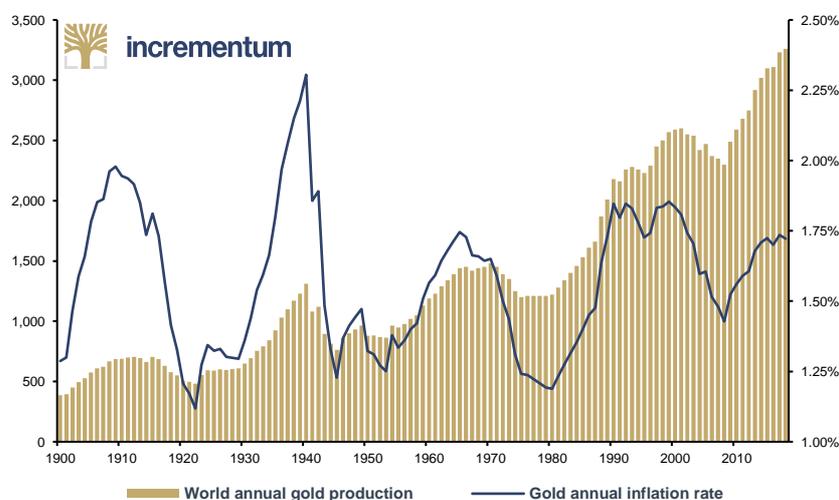
Gold as a sustainable investment

(...) many customers nowadays want to be sure that they buy products which were manufactured under the best possible working conditions and with social responsibility. The demand exists, as is also proven by the commercial success.

**Caroline Scheufele,
Chopard**

While ESG is the new buzzword in the industry, sustainability considerations should not be reduced to these ratings alone. While they might permit a quick evaluation of mining companies, they do not give a rating to the metals themselves. Gold in particular often gets a bad press, as news stories focus on the inhumanity of artisanal gold mines in Africa or the environmental threat of cyanide contamination. Such issues may drive environmentally conscious investors away from the yellow metal. However, we believe they would in fact be missing out on the most sustainable mineral on Earth in terms of its carbon footprint, waste generation, and quantity of resources used in its production.

World annual gold production, in tonnes (left scale), and gold annual inflation rate, in % (right scale), 1900-2018



Source: USGS, World Gold Council, Incrementum AG

Gold, the most sustainable mineral on Earth?

There are many reasons why gold is the most sustainable mineral on Earth, including its elemental properties, its extraction process, and its value retention.

Gold has been mined for more than 7,000 years. Throughout this period, over 190,000 tonnes have been produced, corresponding to the size of roughly 3.5 Olympic swimming pools. Over 50% of this has been mined since the 1950s. Virtually all the gold ever mined is still accessible and available for recycling. If you own gold jewelry, there is a chance that some of it came from mining sites thousands of years old; and gold's unique elemental properties are the reason for that.

Gold was a gift to Jesus. If it's good enough for Jesus, it's good enough for me!

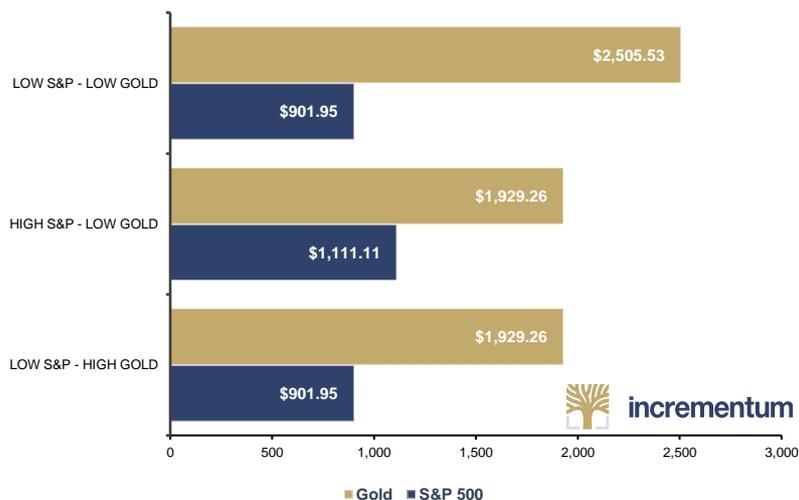
Mr. T

Gold is one of the eight so-called noble elements, which do not react with the air or its components (oxygen, nitrogen, carbon dioxide, and other gases), which is why gold does not tarnish. Gold can therefore be conserved perpetually in its pure form, making it the perfect investment vehicle to pass on from one generation to the next. Therefore, the extraction costs (physical, environmental and social) of the precious metal can be distributed over an indefinitely long period of time, rendering them practically zero. Furthermore, gold does not generate waste once it is in its pure form, because its value is so high that it isn't thrown away voluntarily.

Gold CO₂ emission versus the S&P 500 Index

With its low impact on CO₂ emissions, gold is helping to tackle climate change because investors can use it as a balancing tool to reduce their overall CO₂ footprint. **Gold performs better than the S&P 500 Index with respect to CO₂ emissions.** For every ton of CO₂ produced, gold generates a value of over USD 2,500 compared to USD 900 generated by the S&P. Also, as discussed above, gold's carbon footprint is amortized to zero over time, making it an even more attractive and trustworthy investment in times of climate change-related investment volatility.

Value generated by the emission of 1t CO₂, gold compared to S&P 500, in USD



Source: Dirk Baur, University of Western Australia, Incrementum AG

Gold, the most sustainable currency on Earth

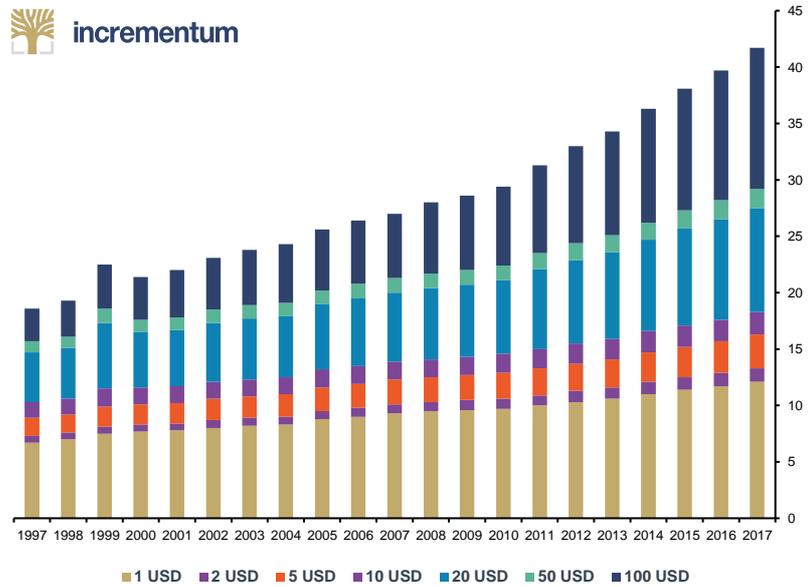
The desire for gold is the most universal and deeply rooted commercial instinct of the human race.

Gerald M. Loeb

Gold’s sustainability as a currency is even more impressive. Gold’s density and malleability make it the perfect currency. It can be used to carry large amounts of wealth in a small space, or it can be divided into very small sheets only a few microns thick. It was the choice of emperors centuries ago, and it remains the first choice of central banks today. Unlike with paper currency, you do not need to add to your gold reserve to maintain purchasing power, because gold is safe from inflation, which lowers its environmental footprint and facilitates its storage.

Fiat currencies, on the other hand, have a large environmental impact. There are around 1.5 trillion coins in circulation worldwide, most made of nickel, copper, and steel, with a combined metal weight of 5.25 million tonnes. To this amount we have to add over 200bn banknotes that have to be reprinted every 4 to 15 years. This number keeps rising.

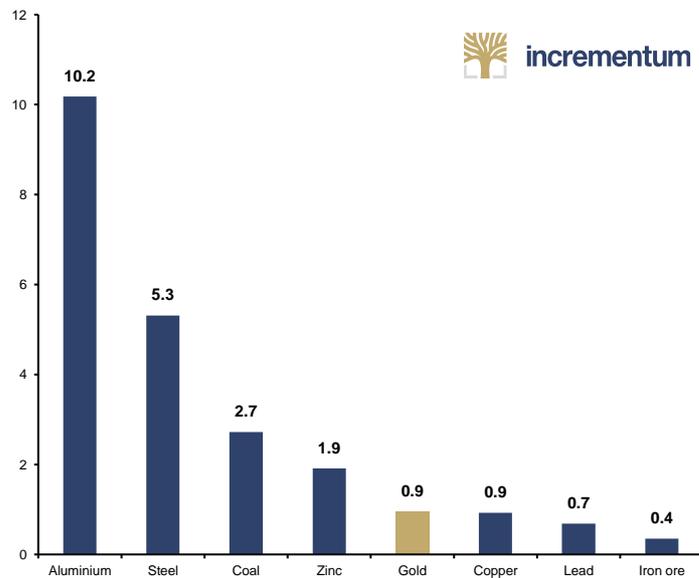
Volume of USD currency bills in circulation, in billions of bills, 1997-2017



Source: US Federal Reserve, 2018, Incrementum AG

The environmental impact of such enormous quantities of metal, cotton, water, ink, and polymer is astronomical, even more so when compared to the total of just 190,000 tonnes of gold ever mined. CO₂ emissions during extraction and processing are another important factor in sustainability comparisons between different minerals.³²⁸

Emissions intensity per value unit, in kg CO₂/USD



Source: Metals Focus, S&P Global Market Intelligence, World Steel Association & EIU, World Gold Council, Incrementum AG

A closer look at the CO₂ emissions per unit of value of gold versus copper, aluminum, steel, coal, zinc, and lead helps us understand the advantage gold has

³²⁸ See "Gold and climate change: An introduction", World Gold Council, June 26, 2018

over other minerals from extraction to purification. What's more, gold recycling processes involve just 10% of the CO₂ emissions of gold extraction, and around 25% of annual gold demand is met from recycled metal.

Conclusion

Mining companies themselves stand to gain from strengthening their ability to “know and show” how they are addressing these issues of public interest.

Helene De Villers-Piaget
Responsible Mining
Foundation

One of the major consequences of mandatory ESG requirements for institutional investors and portfolio managers will be to trigger a hunt for ESG-compliant investments promising alpha returns. The gold mining industry might not feel like a natural fit based on a cursory look at its data, but nothing could be further from the truth. **The rise of ESG compliance in the gold mining industry may provide investors with a significant leap in profitability in an industry desperate for a new image** – an image that has at its core environmental, social, and good-governance principles and a return to financial performance that ensures alpha.

*As noted above, gold mining companies are generally rated poorly with respect to ESG compliance. This is where the greatest opportunities for investors lie. As companies improve their ESG ratings, we should expect a positive impact on their share price performance. This will create a snowball effect down the road, as a company that succeeds in mitigating ESG risks will be inclined to invest even more to further increase its ESG rating. **Once mines become more cognizant of their social and environmental impact and adopt good governance practices, investors may profit considerably from this change of philosophy.***

The secret of change is to focus all your energy not on fighting the old, but on building the new.

Socrates

Gold mining companies are well positioned to transition through the paradigm shift in investment requirements. As we move from investment decisions driven solely by returns to ESG-driven ones, gold mining companies will be able to attract investors because their operations have especially small CO₂ footprints and can therefore be used as the perfect CO₂ portfolio balancing tool. The gold mining sector is ready to build its next bullish cycle on stronger pillars by lowering its environmental and social impact through good governance.

ESG compliance ratings may be subjective, and the system clearly has flaws; but since it is now mandatory, companies will have to comply. For mining companies, it represents both a big challenge and a huge opportunity.



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Gold Mining: Disruptive Innovation at Its Core

“Harnessing technology is central to making mining safer and more efficient. ... The key is to select the right technology and to make the best use of available data.”

Gary Goldberg, CEO Newmont Mining

Key Takeaways

- Gold mining is entering a technology disruption phase, unlocking a new era of profitability for investors.
- Operation centers will control the automated operations of a mining region under one roof.
- Cheaper exploration costs and greater discovery success are needed in order to meet gold’s future demand.
- Blockchains can unlock value for producers, proving their gold is conflict-free.

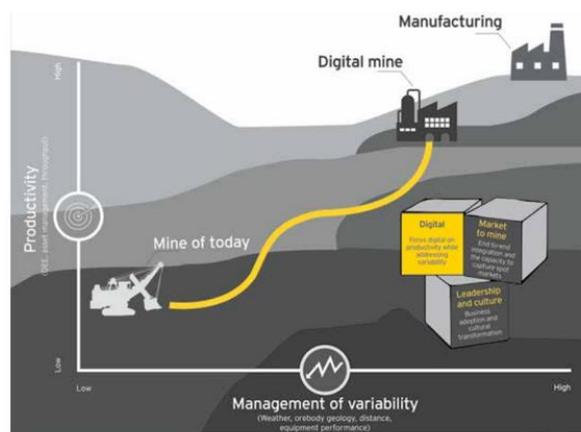
The mining sector has seen a huge leap forward in the way companies are doing things. The advances we are seeing are on par with what happened in the financial sector 10 years ago.

Louis Canepari,
VP Technology Goldcorp

Introduction

Mining is often viewed as a dinosaur when it comes to innovation. A lot of the technologies used today have been around for decades if not centuries. Now, a perfect storm is brewing on the horizon, where all elements are in place for a major technology disruption to take place. These changes will make mining more efficient, safer, healthier, faster, and more profitable.

Digitalization and its impact on mining productivity

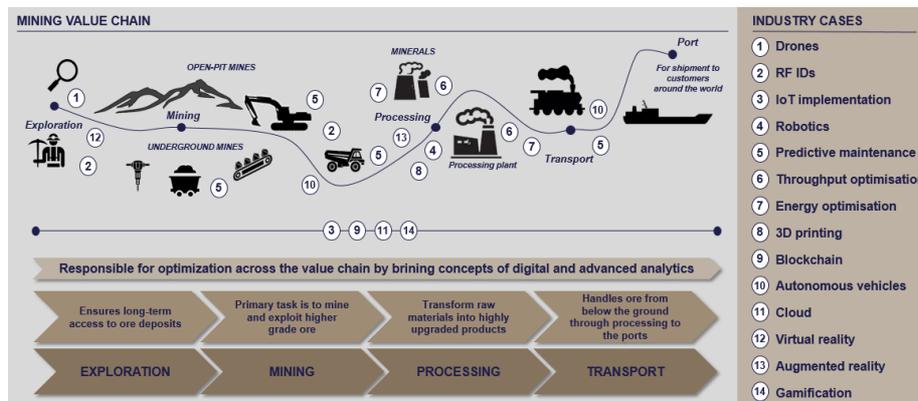


Source: EY

New technologies are being implemented in gold mining sites all over the world. The industry is undergoing transformation along the entire value chain, and more specifically in its three main phases:

- exploration
- production
- remediation

Emerging technologies in the mining value chain



Source: The Australasian Institute of Mining and Metallurgy

These new technologies hold the promise of improving mine safety, increasing efficiency, and reducing cost. These advantages will unlock massive value for investors.

Disrupting the production phase

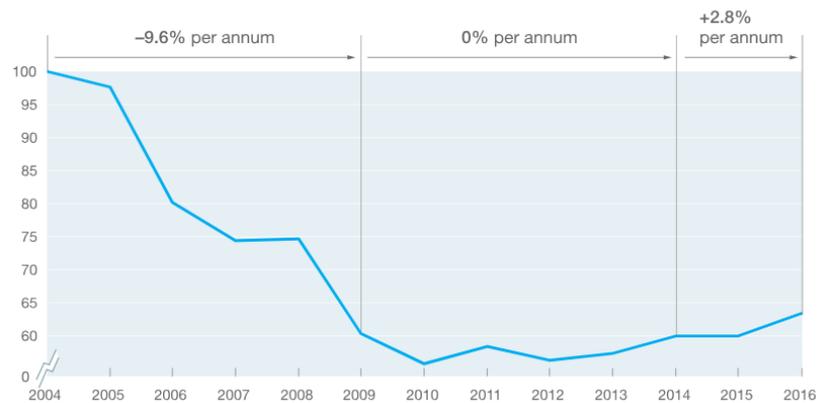
I have confidence in mining. I see exciting opportunities in it.

Patrice Motsepe

Mining companies have seen an important decrease in their productivity levels for the last 15 years. The industry is also under pressure because costs are rising and the complexity of mining is growing. Additionally, **grades have declined over time and operations are located more remotely** than ever before.

Therefore, to maintain gold production levels, companies used to simply process more ore. This philosophy has proven to very efficiently sink productivity and profitability.

MineLens Productivity Index (MPI), 2004 = 100



Source: McKinsey&Company

If you have always done it that way, it is probably wrong.

Charles Kettering

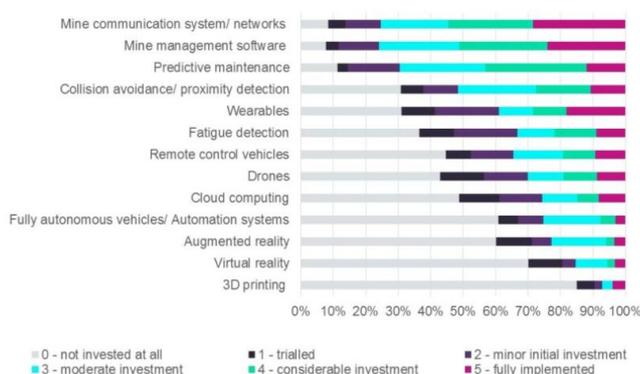
As a consequence, investors fled the sector. The industry must now seize the opportunity to take a technological leap and move in a new era of digitalized mining. In doing so, mining companies will increase productivity, reduce their operational costs, minimize their constraints, and maximize their resources. Furthermore, a healthy industry will draw investors back. To achieve these objectives, **mining operations will have to become interconnected, driven by real-time data and predictive analytics.**

In looking at technological investments of mining companies, connectivity comes to the forefront. As per the GlobalData “Global Mine-Site Technology Adoption Survey”, almost 30% of mines are now fully connected, and over 50% have seen a considerable investment over the last few years.³²⁹

³²⁹ GlobalData: “Global Mine-Site Technology Adoption Survey, 2018”, November 2018

Mining technology investment

Q: To what extent have you invested in the following?



Source: GlobalData, "Global Mine-Site Technology Adoption Survey", 2018

This connectivity should come as no surprise, since almost all major technological disruptions require a reliable network to transmit in real time the data that is collected.

IoT is when the toaster mines Bitcoins to pay off its gambling debts to the fridge.

Another important technological advancement in mining operations is the Internet of Things (IoT). This technology allows different objects to be connected together, to acquire data, and to be controlled remotely. It is, for example, at the center of smart wearables like fatigue-detection systems. It also enables efficient proximity-detection systems that allow the use of fully autonomous, remotely controlled vehicles. However, in order to control these trucks, centralization of the data generated coupled to cloud computing is essential. This allows for all the information to be treated both on-site and remotely.

A 2011 study by Caterpillar Global Mining found that 65% of surface haul truck accidents were attributable to fatigue. The use of smart fatigue detection wearables has proven to reduce accidents by 18% on mine sites.

The acquisition of data in real time and its centralization into one management software system allows the use of AI to maximize mining operations according to management objectives: grade augmentation, water consumption reduction, ounces production maximization, CO₂ emissions reduction, etc. **These advances pave the way to the creation of operation centers that control all mining operations under one roof.**

Barrick-Newmont: a technology-driven joint venture

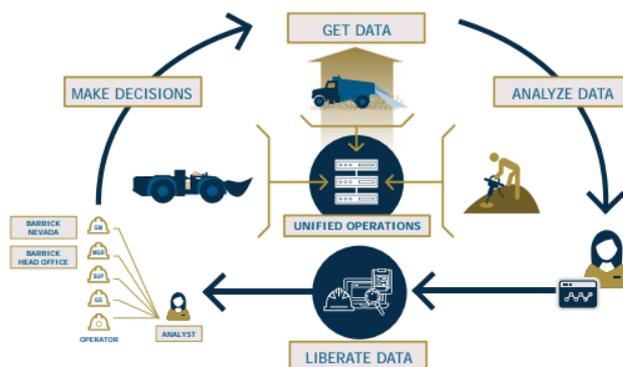
The Barrick-Newmont joint venture is just the first of many to come in the gold mining sector.³³⁰ In 2016 Barrick created the Barrick Nevada Analytics and Unified Operations (AU Ops) Center. This center serves as the nervous system of its mining operations in the region.

When Barrick first approached them, Newmont rejected a merger. Newmont considered that Barrick wasn't delivering good enough results globally. Newmont did, however, accept a joint venture of their operations in Nevada under Barrick

³³⁰ "Barrick Gold ends hostile Newmont bid, signs Nevada joint venture", Reuters, March 11, 2019

Management. We can foresee both companies' mines being controlled at Barrick's AU Ops. The AI that manages the mines sites will also greatly benefit from the additional data from the Newmont mining operations.

Barrick's Nevada AU Ops Center workflow



Source: Barrick Gold

Barrick's will integrate into its models countless solutions found by different mining operators, multiplying the impact of even the smallest positive change. The companies anticipate that the combining of their operations in Nevada will save shareholders up to USD 5bn.

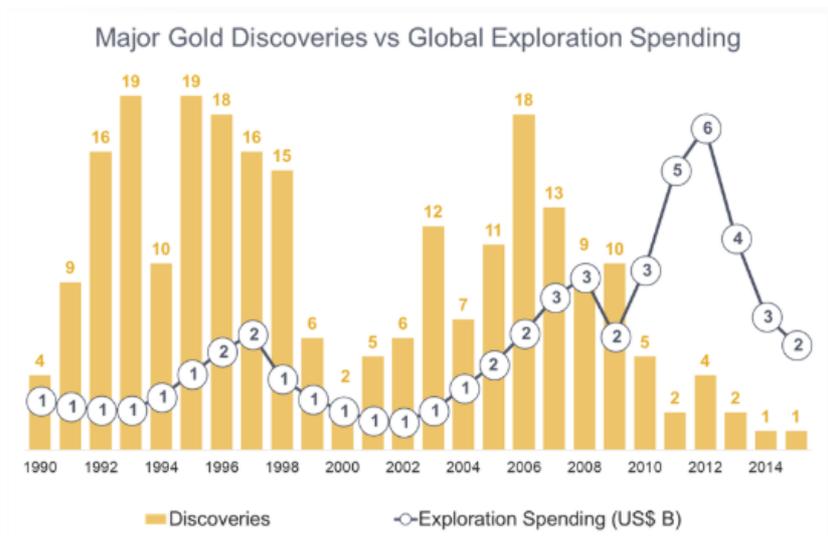
Another promising outcome of the joint venture is that many more companies will want to duplicate the Barrick-Newmont business model. **This will give birth to a new era of coopetition in the gold mining sector, where mining companies are cooperating in specific jurisdictions while remaining competitors in others.**

Disruption in the exploration phase

The use of disruptive technologies and specifically AI will prove transformative for more than just the production phase in mining. Gold mining exploration is facing important challenges, and AI will be one of the key elements for solving exploration's biggest hurdles: underfinancing and the low rate of success of exploration. Solving these problems will generate capital to meet future gold demand.

*If you can dream it,
you can do it.*
Walt Disney

Major discoveries vs. global exploration spending



Source: Goldspot Discoveries

A new type of exploration drilling, using coiled tubing rather than a diamond drill or reverse conditioning, can reduce the costs of exploration drilling from up to USD 400/meter to as little as USD 50/meter.

Disruptive technologies are already changing the way exploration is being carried out. AI, drones, and smart drilling are bringing an exciting new wave of opportunity to the sector.

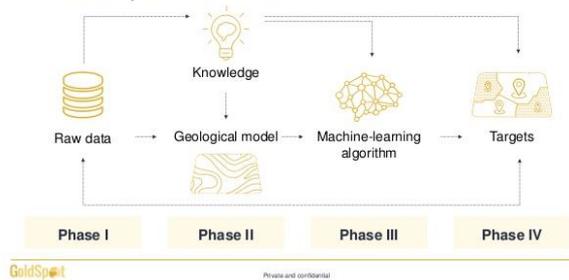
Clearly the most disruptive technology in gold mining exploration is the use of AI to process the raw data acquired before engaging in costly drilling. While

exploration companies are valued on the potential of their property, their true value can only be unlocked with drilling results. A company that spends millions of US dollars on its drilling campaign might never be able to raise more money for another round of drilling. However, that in no way means that the property does not hold valuable resources. It might mean that the team of geologists was unable to identify the best target to maximize the chances of finding gold-carrying structures.

This is exactly why AI will revolutionize the sector and not only help explorers increase their success rates but also help producers extend their known deposits or even find new deposits. As these analyses are performed before millions of US dollars are spent in drilling, the use of AI will prove transformative for an underfinanced industry.

AI-driven exploration

The Goldspot Workflow



Source: [Goldspot Discoveries](#)

There cannot be a more disruptive innovation than one that gives birth to a new business model.

Julien Desrosiers

An indication of what is to come could be seen earlier this year, with the first IPO of an AI-based exploration company on Toronto’s TSX Venture Exchange.³³¹ GoldSpot Discoveries is based on a new business model still little-known in the mining sector: identification of high-value targets in exchange for fees, and a royalty on the property if proven successful. With the backing of this company’s data, geologists will demonstrate proof of concept of their geological theories in an all-new way and with far greater confidence. Companies will therefore be able to attract new capital for financing the exploration drilling phase. This new way of looking at mining properties will definitely be the most disruptive use of technology in the exploration sector.

However, before being able to process data, gold mining companies must first acquire it. It is in these very first steps that drones can massively reduce the costs of exploration and increase its efficiency. Drones are used to replace costly helicopter-based geological tests and surveys. They can be deployed in remote locations without any complex logistics. They can fly in harsh weather and operate day and night. They are a greener choice, as they do not emit pollutants and do not disturb habitats. They can explore massive areas in a short time and gather an impressive array of data that saves geologists from walking entire properties that sometimes measured several hundred square kilometers. The data can be analyzed in real time, so geologists can collect additional data without delay or even explore in person an area of interest to confirm the findings. The use of drones will unlock remote locations for exploration and efficient prospection. Last, but not least, operating costs per hour for drones are much lower than for helicopters.

³³¹ “GoldSpot Discoveries Corp. Opens the Market”, Cision – News, March, 12 2019

Drones used for precision exploration mapping



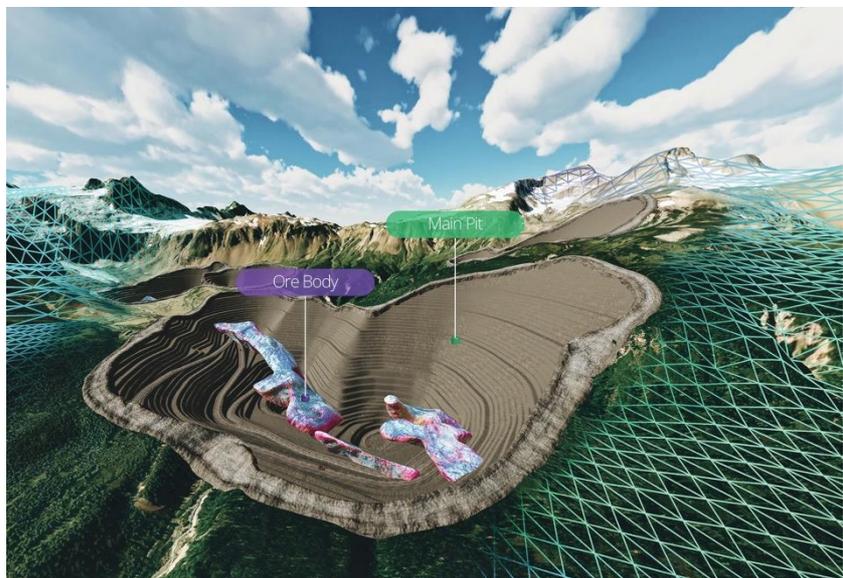
Source: Researchgate

Security is mostly a superstition. Life is either a daring adventure or nothing.

Helen Keller

Exploration drilling will also be transformed by the use of automated drills in combination with smart orientation devices and analysis tools. Since it is now possible to get real-time analyses of core sample results, geologists will have access to relevant, detailed information at light speed and make informed drilling decisions. New ways of rendering the data acquired during the basic exploration and the drilling phase are enabled by the use of virtual reality and augmented reality.

Augmented reality view of a deposit



Source: Llamazoo

These technologies allow geologists to understand their resources in ways that were completely unimaginable a few years back.

Technology in remediation

Finally, site remediation, too, will benefit from innovative technologies. For example, real-time sensors can measure acid levels in rivers or the stability of dam walls and help miners secure sites taken out of production and better understand how to avoid catastrophic events. In light of events like the Vale dam collapse, these new technologies may even prove to be lifesaving. Additionally, the real-time capture of the progression of fauna and flora rehabilitation will help ensure successful remediation of old mining sites and contribute to a positive relationship with local communities.

If we make mining more efficient, people who work in mining should have safer jobs and more long-term jobs, because if you do efficient mining you can also extend the life of a mine.

Diane Jurgens
BHP CTO

Just as with mining operations, exploration and site-remediation data will become digital, automated, and processed by AI. This data, provided in real-time, will also improve a company's management of ESG risks. The company's command center could detect the first signs of an accident in the making, initiate immediate action, and save precious response time. From sending help directly to miners in the most urgent situations, to identifying them through the use of smart wearable technology, to using equipment in order to save miners' lives or contain an area of exposure, these command centers will unlock safer mining both for the miners and their communities. Cooperation between business competitors in the hope of mutually beneficial results is becoming a key factor in the gold mining community. For instance, sharing relevant data to prevent accidents can help competitors to limit damages.

New technologies and their impacts for investors

Many may think that we are still far from the implementation of the above-mentioned technologies and even further from their associated profitability, but the truth is quite the opposite. Rio Tinto has been an early adopter of many technological advances, and their progression has been most impressive. In the gold sector, a technology gap between forward-looking Australian mining companies and the rest of the world has been observed the past few years.

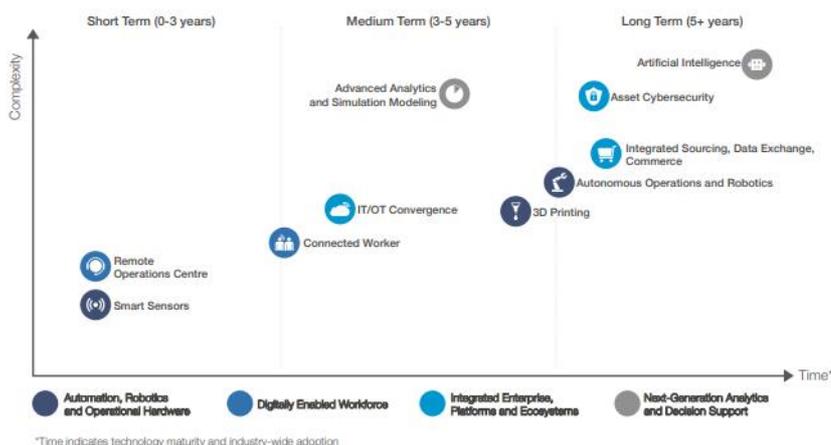
Australia vs. Canada vs. US Gold Index, 01/2015=100, 01/2015-03/2019



Source: Bloomberg, Incrementum AG

Surely, a whole paper could be written on the many factors that can explain the outperformance of the Australian gold index, but the most important one in our opinion is the early adoption of new technologies by the Australian mining community. In 2008 Rio Tinto opened in Perth the first mining control center with autonomous vehicles. That was more than 10 years ago. At that time, new-technology implementation periods were long. Today’s companies can benefit from these early adopters and now face only short implementation periods.

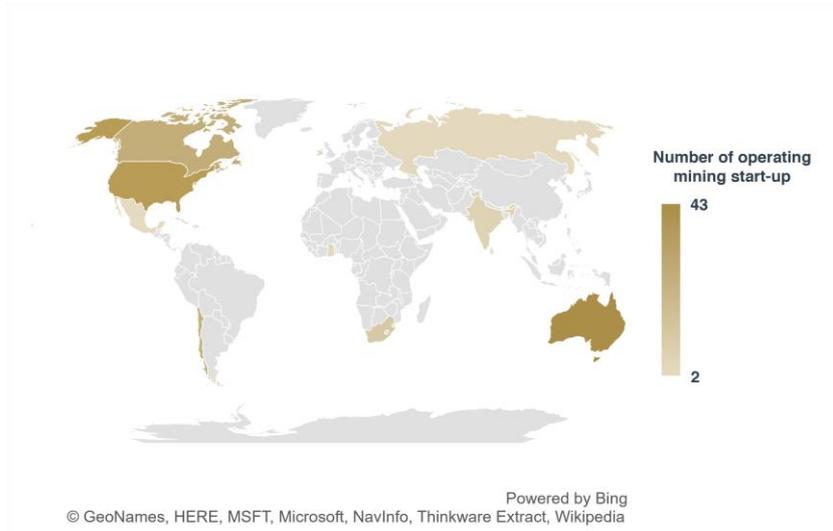
Figure 8: Time and Complexity for Digital Initiatives to Reach Scale



Source: WEF

Since we expect the mining sector to become fully automated within the next 10 years, the biggest upside for investors is available now. Based on the success of the Australian mining companies, we foresee the same increase in profitability patterns happening in other jurisdictions such as Canada and the United States.

Operating mining startups per country



Source: Dr. Kash Sirinanda

Technology and innovation are not magic bullets that will automatically improve the fortunes of the mining industry. However, it is critical to make significant investments in new technologies that are tailored to individual operations to ensure resource development remains responsible and sustainable, cost effective, safe and productive.

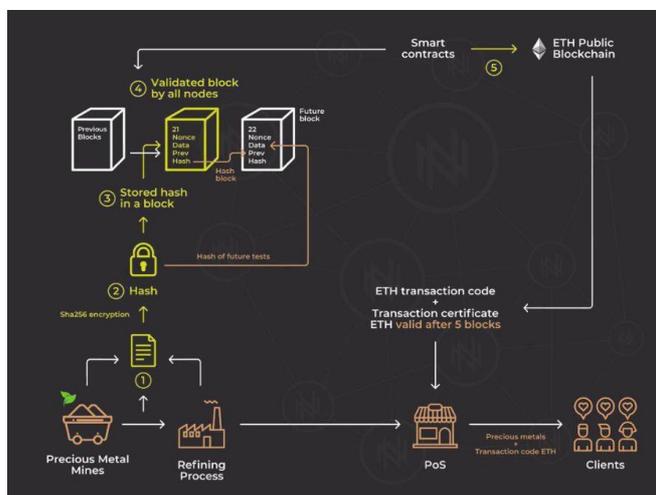
Sean Boyd,
CEO Agnico Eagle

Canadian and US mines are expected to be the biggest investors in new technologies in the next two years. **We believe that North American mining companies will greatly benefit from a technology-driven start-up scene that has now reached the size of the Australian one.** Because the early phases of new-technology implementation trigger the greatest increase in profitability, **investors should pay close attention to the current, unique period of technology disruption. This period holds a golden promise for investors and the gold mining community.**

Traceability, a priority

Disruptive change in mining technologies is not limited to the miner's daily operations. For example, gold point of origin can be traced throughout the gold value chain from the mine site to the jewelry retailer or institutional investors.

Use of blockchain for gold traceability



Source: Innovaminex

The blockchain does one thing: It replaces third-party trust with mathematical proof that something happened.

Adam Draper

To ensure its point of origin, ore is placed in a sealed bag before leaving the mine, with a unique ID code assigned to it. This code is then added to the blockchain. Each entry in the blockchain contains information about ore quantity, provenance, concentration, date produced, etc. Then at every step of the value chain, the stakeholders add information relevant to their processing of the ore until it is ready to be sold as pure gold or jewelry. The customer is able to verify this information and buy gold that corresponds to his precise needs and investment objectives.

Not only will the use of blockchain technology enable buyers to acquire only conflict-free gold from specific ESG-compliant mining sites, it could also allow investors to empower a specific region by buying gold from only one particular mine or jurisdiction.

Blockchain will not only be relevant for investors but could also greatly affect mining companies' bottom line. BDO, a chartered accountant firm, predicts that we could see a gold price premium of between 3% and 5% for conflict-free mined gold in the next years. Traceability will ensure that safer and ESG-compliant methods are adopted all along the gold value chain, helping to tackle not just environmental but also social and governance issues.

Conclusion

The sky is the limit to what technology can do for the mining sector.

Vince Gerrie

The technological disruptions discussed in this chapter will be used to improve not only mining operations but also the mining sector's ESG compliance. Mining companies will be safer, cleaner, and more productive, with positive repercussions for stakeholders throughout the value chain. These new technologies will ensure a transition to a much more transparent industry. The positive impact on miners' bottom line will shorten the adoption and implementation timeline to the great benefit of gold mining investors. **We see a tremendous upside for investors, as most of the increased profitability from the adoption of new technologies will happen early in the transition cycle.**



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Technical Analysis

“The two most powerful warriors are patience and time.”

Leo Tolstoy

Key Takeaways

- Gold sentiment continues to oscillate between disinterest, agony, pessimism, and slight confidence.
- From the point of view of current technicals, seasonality and the CoT report, we would not be surprised to see a continuation of the chill-out phase for several weeks. However, we do not expect a deep correction after apparently high buying interest is waiting on the sidelines.
- Midas Touch Model: Gold has is in "bearish mode" since May 20th. A patient stance until the summer low seems advisable. If the resistance at 1,360 is finally taken out, the next price target is 1,500 dollars by spring 2020.
- In our opinion, the gold price is at the transition from the accumulation phase to the participation phase. Investor demand is the key driver. The crossing of the technical rubicon level at 1,360 will trigger increased interest on the part of institutional investors.

Technical Analysis

“Jim Grant: ‘I remember this from my work about Bernard Baruch, the great speculator of the turn of the 20th century. And the phrase was, to quote, ‘to break the continuity of bearish thought’. And price action does that, right?’

*Bill Fleckenstein: ‘Right. Exactly. So I think that the market breaks very much – you’re **going to break the discontinuity of bearish thought about gold...** And the miners, as well – they’re so depressed. 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.’”*

Jim Grant and Bill Fleckenstein³³²

Again this year, we complement our comprehensive macroeconomic, (geo-)political, and fundamental analysis with a short view on the technical status quo of the gold market.

Successful investing is having everyone agree with you... later!
Jim Grant

Last year we wrote at this point: *“The analysis of market structure, sentiment, and price pattern allows us to come to a positive technical assessment. A speculative adjustment has already taken place in the futures market, which should provide a healthy foundation for further price rises, although a final ‘wash-out’ under the support at USD 1,280 does not seem entirely unlikely.”*

This assessment has proved to be largely correct. The final “wash-out” went further than expected and culminated in a panic low on August 16. Since then, the gold price has rallied from USD 1,160 to up to USD 1,340.

The bigger the base, the higher the space!

What is our current technical assessment of the gold price? We are again using the Coppock curve, a reliable momentum indicator, to determine our long-term view.³³³ A buy signal is given when the indicator turns up below the zero line, i.e. assumes a positive slope. The advantage of this indicator is that large trend changes can be reliably identified. The indicator has been on a buy signal since the end of 2015 and has been gradually moving upwards since then. The MACD has also been on a buy since early 2016 and is slowly creeping up.

³³² [“Diagnosing Monetary Disorder”](#), Real Vision interview featuring Bill Fleckenstein & Jim Grant, October 29, 2018

³³³ Specifically, these are two time-weighted momentum curves that are added together and whose long-term moving average represents the Coppock line. We use a slightly modified Coppock with slightly longer periodicities.

Gold, Coppock indicator, and MACD (monthly), 01/2001-02/2019



Source: investing.com, Incrementum AG

Patience is power. Patience is not an absence of action; rather it is timing; it waits on the right time to act, for the right principles and in the right way.

Fulton J. Sheen

The following chart clearly shows that the impulsive rise from USD 280 to USD 1,920 has been corrected since 2011. **As part of this corrective movement, an impressive inverse shoulder-head-shoulder formation has been forming since 2013, which could explosively resolve upwards.** Currently, however, the price has already failed several times on the neck line in the resistance range of USD 1,360-1,400. **If the gold price were to break through this resistance zone, the next target would be almost USD 1,800, as calculated on the basis of the distance from the head to the shoulder line, projected upwards.**

Gold (200-day moving average): Shoulder-head-shoulder formation, 2003-2019



Source: investing.com, Incrementum AG

If it's obvious, it's obviously wrong.

Joseph Granville

As far as sentiment is concerned, we can only repeat what we said last year. The mood regarding gold continues to fluctuate between disinterest, agony, pessimism, and slight confidence. According to Bloomberg, the analyst consensus is still without a strong opinion. A slight increase to USD 1,381 is expected for 2022. Such a long-term sideways movement, however, is a development that seems extremely unlikely – if one has studied market behaviour. However, it should also be mentioned that none of the 30 analysts surveyed expects prices *below* USD 1,000 in the long term. From an anti-cyclical point of view, this is quite worrying. **On the other hand, there is only one analyst who expects long-term prices to exceed USD 2,000. The mentioned analyst is the author of these lines, by the way.**

Bloomberg: Analyst consensus for gold and silver: Q2 2019-2022

	Sent.	Spot	Q2 19	Q3 19	Q4 19	Q1 20	2019	2020	2021	2022
1) Gold \$/t oz		1281	1284	1291	1299	1310	1297	1322	1353	1381
Forecast (Median)			1300	1325	1345	1350	1315	1367	1324	1328
Diff (Median - Curr)			+16	+34	+46	+40	+18	+45	-29	-53
2) Silver \$/t oz		14.84	14.91	14.99	15.13	15.24	15.15	15.42	15.88	16.31
Forecast (Median)			15.66	16.00	16.73	16.76	15.95	17.10	16.75	18.60
Diff (Median - Curr)			+0.74	+1.01	+1.60	+1.52	+0.80	+1.68	+0.87	+2.29

Source: Bloomberg

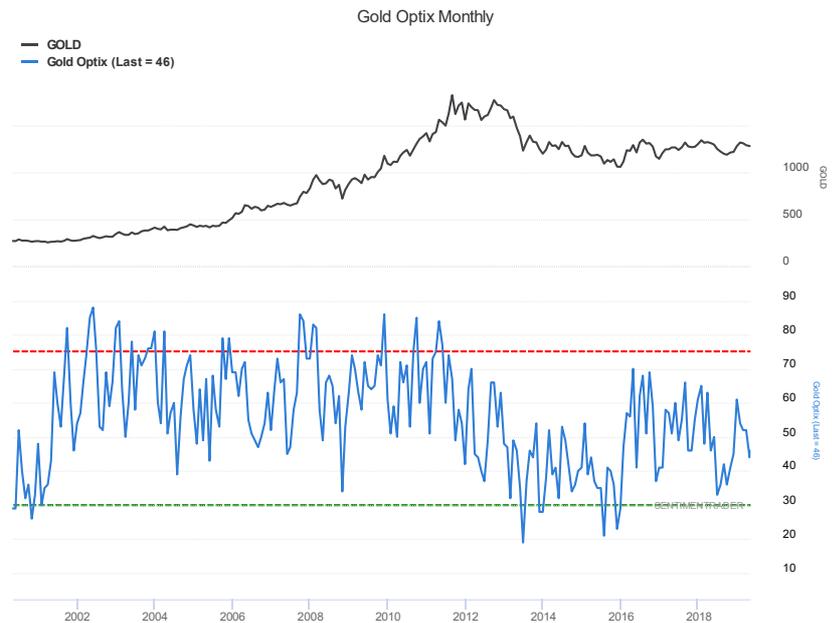
We forget that Mr. Market is an ingenious sadist, and that he delights in torturing us in different ways.

Barton Biggs

As you know, one of our favorite sentiment indicators is the Optix Index from Sentimentrader.³³⁴ It amalgamates the most prominent sentiment surveys with positioning data from the futures and options markets. The logic behind this sentiment indicator is a very simple one. If public opinion forms a strong consensus, this broad consensus is a good counter-indicator. The market is usually too bullish when prices have already (strongly) risen and too bearish when they have already fallen. If the Optix rises above the red dotted line at 75 points, you have to be more careful. If it is 30 points or below, however, pessimism is pronounced and the downside risk is limited. **The Optix is currently trading at 46 and thus at a neutral level.**

³³⁴ www.sentimentrader.com

Optix indicator and gold price, 2000-2019

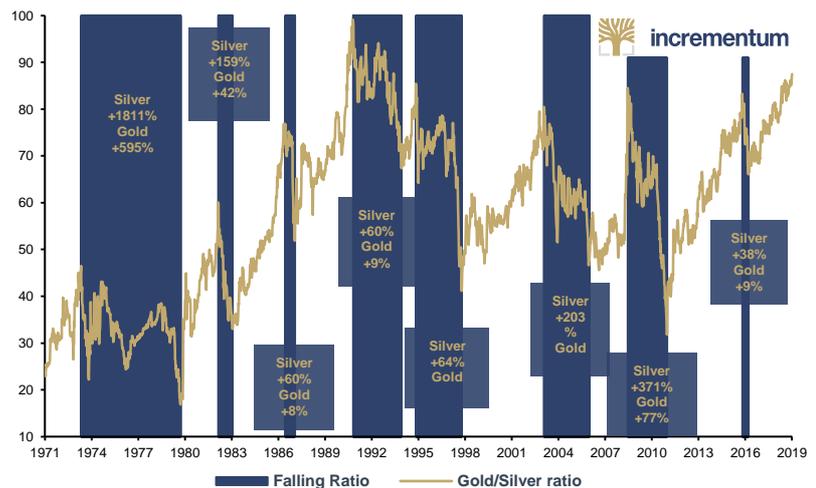


Better three hours too soon than a minute too late.

William Shakespeare

The silver price could also be interpreted as a sentiment indicator for gold. Strong bull markets for silver usually only happen in the course of rising gold prices, because investors seek higher leverage and end up with mining stocks or silver. With the gold movement still meandering, silver is likely to wait for the next breakout attempt of the gold price before gaining trend strength and relative strength to gold. **The ratio of 88 clearly shows that sentiment in the precious metals space is currently at rock bottom.**

Gold/Silver ratio, 01/1971-05/2019



To buy when others are despondently selling and sell when others are greedily buying requires the greatest fortitude and pays the greatest reward.

John Templeton

The above chart shows that the G/S ratio is subject to large fluctuations over time. Around 1980 we can see a low point at a ratio of 16, while in 1991 it almost reached the 100 mark. At the moment, it seems that the ratio wants to test the highs from 2008 at around 87. **The risk of price declines appears to be limited at this historically extreme relative valuation.** However, silver remains dependent on the price movements of gold, and bullish momentum seems unlikely in the medium term. **Should our basic assumption of a changing inflation trend prove to be correct, silver is probably one of the best investment opportunities to profit from rising inflation in the coming years.**



Courtesy of Hedgeye

Last year we have thoroughly analyzed the seasonal patterns of gold, silver and mining stocks with the help of our dear colleagues from Seasonax. This year we want to take just a brief look at the seasonal patterns.³³⁵ The following chart shows the annual development of gold in pre-election years. It can be seen that the seasonal tailwind is particularly positive in the second half of the year, but beforehand a low price is reached in summer.

Seasonality of gold in pre-election years



Source: Seasonax.com

³³⁵ "Technical Analysis", *In Gold We Trust* report 2018

The Midas Touch Gold Model™³³⁶

“The beginning of wisdom lies in the definition of terms.”

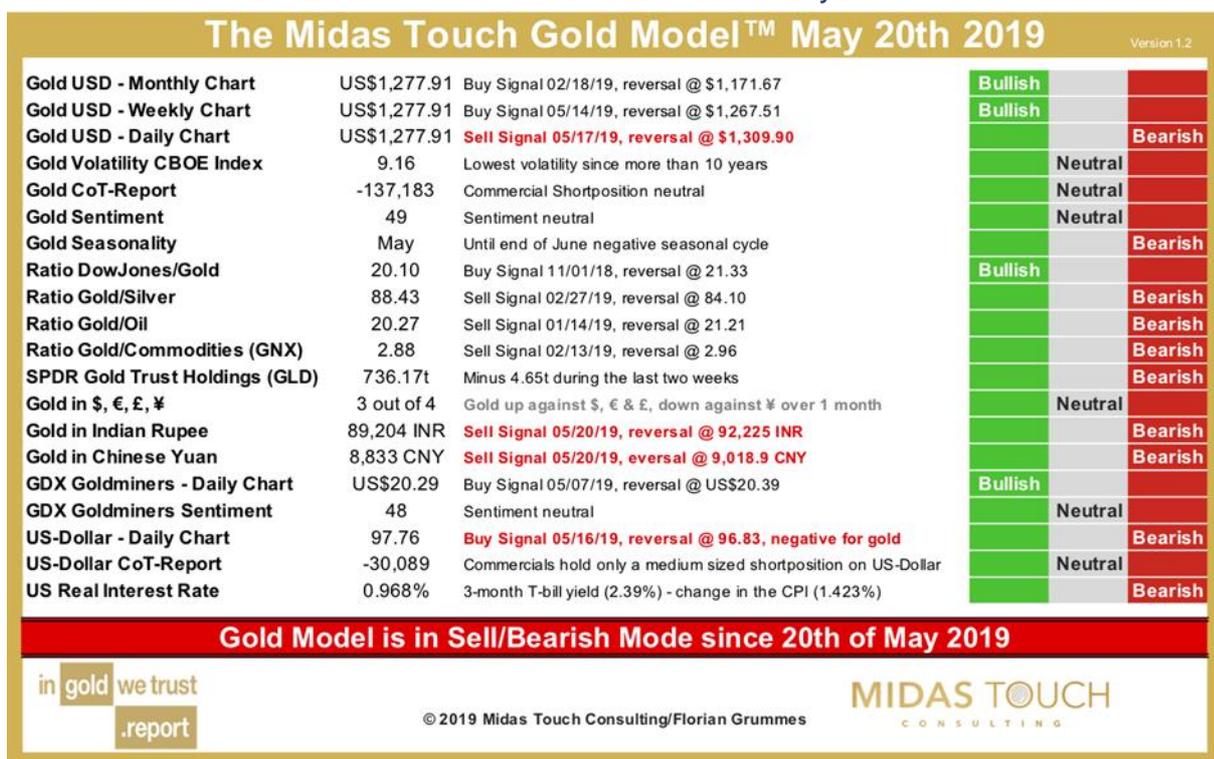
Socrates

A rational and holistic approach to analyzing the gold market.

As in previous years, we would like to give you a comprehensive update on the current status of the Midas Touch Gold Model™ this year.³³⁷ In summary, its strengths lie in versatility and quantitative measurability, as it carefully examines as many perspectives on the gold market as possible.

Since the nasty sell-off in summer 2018, gold prices had recovered in a slow but convincing fashion towards the **well-known multi-year resistance zone around USD 1,350-1,375**. But since the February 20 peak of USD 1,346, the gold market has been in a clear correction, and the final low of this down wave is not yet visible.

The Midas Touch Gold Model: In sell mode since May 20



Source: Midas Touch Consulting, Florian Grummes

The first principle is that you must not fool yourself – and you are the easiest person to fool.

Richard Feynman

After flashing a sell signal end of February and a neutral reading over the last three weeks, the Midas Touch Gold Model has now moved back to a bearish conclusion. And even though the two higher timeframes (monthly and weekly) for gold in US-Dollar do look rather good, it still takes a gold price above USD 1,310, to turn

³³⁶ We sincerely thank Florian Grummes for this contribution. Florian is founder and managing director of Midas Touch Consulting (<http://www.midastouch-consulting.com>). Our readers can subscribe for free updates and the Midas Touch newsletter at the following link: <http://bit.ly/1EUdt2K>

³³⁷ A detailed description of the model and its philosophy can be found in “Technical Analysis”, In Gold We Trust report 2016.

around the daily chart. **Here we need to consider, that in such an extremely low volatile environment as gold finds itself right now, a fast and unlikely USD 30 plus move to the upside would already be a game changer.**

Looking at the current Commitment of Traders report (CoT), the immediate outlook for gold is rather unfavorable. The smart money, which of course are the commercial hedgers, did increase the cumulated short position into gold's recent recovery. This short position might now be still large enough to trigger the typical pre-summer panic sell-off towards June or July. Yet at the same time a massive USD 100 plus down wave is rather unlikely.



After spending many years on Wall Street and making and losing millions, I would like to stress the following: I don't deserve the big winnings with my thinking. It was my perseverance. I just didn't let you fool me.

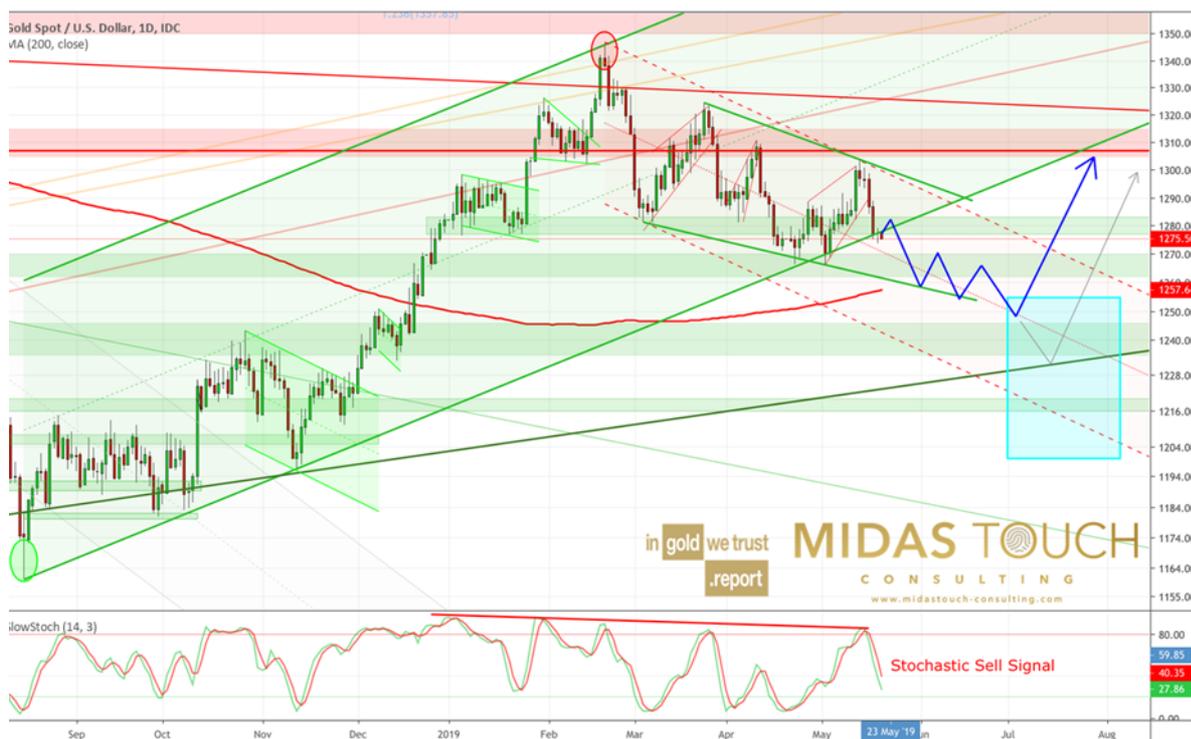
Jesse Livermore

Combining the CoT report with gold's seasonality, the most likely scenario sees a continuation of the ongoing mild correction towards at least the 200-day moving average (USD 1,257). Probably between June and the middle of August, gold should therefore find a bottom between USD 1,200 and USD 1,250. In the bigger picture, this would not violate the series of higher lows but rather strengthen the promising ascending bullish triangle formation that gold has seemed to tinker with since its low at USD 1,045.

If you consider the four ratio components of the Midas Touch Gold Model, none of them is screamingly bullish at the moment. In fact, the Dow Jones/gold ratio is rather close to losing its bullish signal! **But should the "sell in May" cycle, plus the US-China trade dispute, force stock markets lower, the important Dow Jones/gold ratio would remain in favor of gold.** The other three ratios will likely catch up once gold has seen its trend reversal in the next few months.

When gold-mining managers have to justify the weak performance of their stocks, they often complain about ETFs as a passive investment competitor. Certainly, the current holdings of the GLD gold ETF of 736 tonnes are rather shallow, but you can be sure that once gold can break above USD 1,360, mainstream investors will rush into these products as they did from 2004 to 2011. Back then, the ETFs were one of the main drivers behind gold's bull market. But for the time being, the Midas Touch Gold Model considers GLD's recent outflows as bearish. And talking about the miners & ETFs, the GDV has a buy signal since May 7th but was not able to make any meaningful progress to the upside. This sideways consolidation more likely confirms, that the correction is still not over.

Finally, the US-Dollar might be the missing puzzle for gold's return. So far, gold has held up surprisingly well as the US-Dollar has been strengthening over the last 14 months. Currently, the model detects a buy signal for the US-Dollar and therefore a bearish signal for gold, while US real interest rates around 1% remain an argument against gold. But the consumer price index (CPI) has been moving up for the first time in six months. **Should this uptrend continue, lower real interest rates could become an important driver for rising gold and silver prices.**



Source: TradingView, Midas Touch Consulting, Florian Grummes

Conclusion

Overall, the model is bearish and advises a neutral and patient stance until the typical summer low (normally to be found between end of June and mid of August). Should gold not dive too deep until this low of the year, the sleeping more than 5,000-year-old golden dinosaur might indeed have enough power to break through the resistance around USD 1,360 and catapult himself towards USD 1,500 by spring 2020.

We are convinced that investors and traders can benefit from the Midas Touch Gold Model and its rational approach. Although the model is of course not always right, 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](#).

Conclusion

“Great opportunities do not come every year.”

Charles Dow

The public, as a whole, buys at the wrong time and sells at the wrong time.

Charles Dow

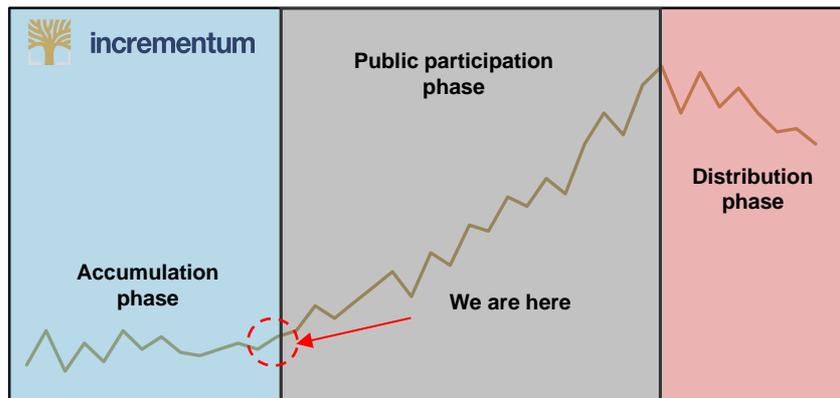
Technical analysis is certainly not an exact science, but rather a useful tool for determining the location and timing of investments. It is important to us not only to understand the "big picture" fundamentally and from a macro point of view, but also from a technical point of view. An extremely useful theory, which also forms the basis of technical analysis, is the subdivision of 3 trend phases. This is based on Charles Dow, the "Godfather of Technical Analysis".
Dow divided each trend into 3 different phases:

1) Accumulation phase: In this first phase, the most informed, astute, and contrarian investors buy. If the previous trend was downwards, then the clever investors can see at this point that the market has already discounted the “bad news”.

2) Public participation phase: Prices are starting to rise slowly. Trend followers are showing interest; news is improving; and commentators, the media, etc. are writing increasingly optimistic articles. Speculative interest and volumes are rising, new products are being launched, and analysts’ price targets are being raised.

3) Distribution phase: During this final mania phase, the group of informed investors who have accumulated from near the low point begins to reduce their positions. Media and analysts outperform each other in raising their price targets, and the environment is characterized by “this time is different” sentiment (see Bitcoin at the end of 2017, oil in 2008 and FAANG stocks or unicorns at the moment).

Three phases according to the Dow theory



Source: Incrementum AG

The combination of continued relatively low investor interest and analysts' lack of price fantasizing is a good foundation for a continuation of the uptrend after the final capitulation of the last bulls last summer, and confirms our assumption that the gold price is still in the accumulation phase.

Sometimes the gold market seems like an MMA fight. The metal is down on the canvas, seemingly helpless, yet it keeps getting pummeled unnecessarily.

Brien Lundin

From the point of view of current market sentiment, seasonality, and the CoT report, we would not be surprised to see a continuation of the “chill-out” phase for several weeks. However, we do not expect any significant selling pressure on the downside, as seemingly high buying interest waits on the sidelines, which leads to a “buy the dips”. In addition, positive seasonality, which is particularly strong in pre-election years, should provide a tailwind in the second half of the year. **In this respect, conditions for the establishment of the new bull market seem excellent from a technical point of view.** In our opinion, the gold price is at the transition from the accumulation phase to the public participation phase. **Passing the resistance level at USD 1,360-1,380 could trigger increased interest on the part of institutional investors.**



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Quo Vadis, Aurum?

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

Simon Mikhailovich

Key Takeaways

- The erosion of trust in many areas plays into gold's hands. An end to these multiple crises of trust is not in sight.
- Gold has only recently reconfirmed its status as an excellent hedge against stock market slumps (Q4/2018).
- The expected reversal of monetary policy back towards interest rate cuts, QE, negative interest rates, and a loose fiscal policy (MMT) as soon as a recession is in sight will boost the gold price.
- The political and economic tensions between the USA and China are increasing. These and other uncertainties, such as the worsening situation in Iran, should support the gold price.
- As soon as the gold price breaks through the resistance zone at USD 1,360–1,380, a gold price of USD 1,800 seems within reach in the medium term.

“Trust is central to an economy that works.”

Stephen Covey

The leitmotif of this year’s *In Gold We Trust* report is the present-day erosion of trust. Because trust is a fundamental requirement of human existence, a shift in the level of trust in a society usually affects most, if not all, aspects of social, political, and economic life. Those who can no longer trust their neighbor or their nation struggle to contribute positively to human society. **Where do we see a particular erosion of trust?**

Erosion of trust in self-evident social and political realities

The battle for what we might call the “prerogative of interpretation” has been going on in the media for some time now: Who is reliably truthful, and who gets to define what is “fake news”? Thus, trust in the established media is declining rapidly in many Western countries.

When the norm is decency, other virtues can thrive: integrity, honesty, compassion, kindness, and trust.

Raja Krishnamoorthi

On the other hand, because the technological revolution makes it possible for everyone to run their own news channel on YouTube, Twitter, Telegram, or as a blog, media institutions that have been unquestioned for decades suddenly face unexpected and sometimes fiercely disruptive competition. And as with every revolutionary innovation, it takes some time for the wheat to be separated from the chaff among the new players and for a new socially accepted structure to come into being.

An essential element – and indeed one of the sources – of this erosion of trust is the increasing polarization of society. Populist movements radically question the self-evident status of the post-war political system. New parties and political movements are emerging, and parties and policies that for decades were taken for granted as key parts of the political process seem to be at risk of disappearing.

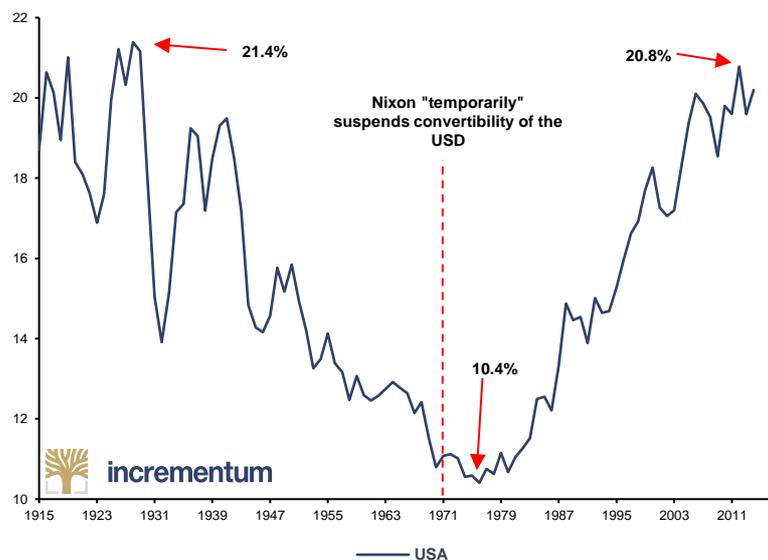
In such experience as I have had with taxation... there is only one tax that is popular, and that is the tax that is on the other fellow.

Sir Thomas White

At the heart of many current social and political debates is the increasing inequality of income and wealth. The public discourse completely ignores the fact that this inequality is massively fueled by the current monetary system through the so-called Cantillon effect.³³⁸ From our point of view, this effect will increasingly put social cohesion to the test.

³³⁸ See “Gold in the Context of the Current Macroeconomic Backdrop”, *In Gold We Trust* report 2013

Income share of the top 1%, in %, 1915–2016



Source: Ourworldindata.com, Incrementum AG

The Trump administration is increasingly using the dollar – and access to dollar clearing and funding – as a geopolitical weapon, risking retaliation and perhaps even jeopardizing the future of the dollar-based global monetary system.

William White

Look back over the past, with its changing empires that rose and fell, and you can foresee the future, too.

Marcus Aurelius

Erosion of trust in established geopolitical realities

We have not reached “the end of history” that Francis Fukuyama proclaimed in the early 1990s; but certainly, a fundamental rearrangement of the world is taking place right before our eyes. With the resurgence of China, an economically and militarily self-confident player has appeared on the international stage, preparing to promote itself from a minor role into a leading role. The current US administration has identified China as a direct challenger and is increasingly bent on a course of confrontation. At an April 25, 2019, conference organized by the Committee on the Present Danger: China, Stephen Bannon, former chief strategist to President Trump, openly denounced China: “*They have been engaged in economic warfare with the West for 20 years.*”³³⁹ The currently escalating trade war between the planet’s largest and second largest economic powers shows how hardened the fronts really are. The best example, in our opinion, of the escalation of bellicosity was an October 4, 2018, speech by US Vice President Mike Pence at the Hudson Institute, in which Pence described the US government’s new China strategy. **It was a speech that sounded like the proclamation of another Cold War.**³⁴⁰

China is also an increasingly strong presence in the global gold market.

We are convinced that China’s engagement is not a flash in the pan but will continue to have a significant impact on both the supply and demand sides of the Chinese economy simply because of the size of China’s involvement with gold.

³³⁹ See Stephen K. Bannon’s [speech](#) at the CPDC conference, April 25, 2019

³⁴⁰ See “[The Administration’s Policy Towards China](#)”, remarks by Vice President Mike Pence at the Hudson Institute, October 4, 2018

*Free trade is God's diplomacy.
There is no other certain way of
uniting people in the bonds of
peace.*

Richard Cobden

*It seems to me that our American
partners are making a colossal
strategic mistake [as they]
undermine the credibility of the
dollar as a universal and the
only reserve currency today.
They are undermining faith in
it.... They really are taking a saw
to the branch they are sitting on.*

Vladimir Putin

In its confrontation with Iran, another long-term adversary, the US is increasing the pressure again. Following the US withdrawal from the multilateral nuclear agreement in 2018, the US is now growing its military presence in the Middle East. In the event of an escalation, the price of oil would presumably soon be above the USD 100 mark; and it is impossible to imagine what the outbreak of an open conflict in the region would mean for the oil price. The region remains a potent source for international crises. Even in the 1970s, geopolitical uncertainties in the Middle East were ultimately the catalyst that caused the monetary inflation of the 1960s to escalate into price inflation. A déjà vu of this sequence is quite possible.

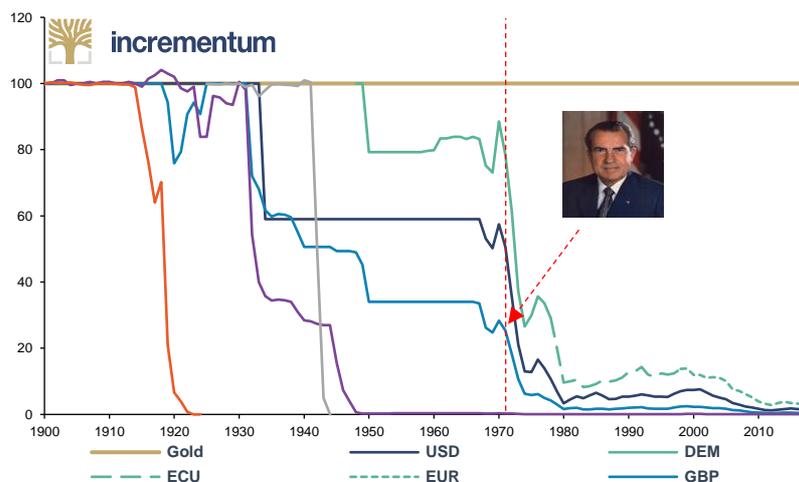
But elsewhere, too, long-accepted political realities are coming to an end. With Brexit, the EU is shrinking for the first time in its history. The UK is not only the second largest EU economy and a net contributor to the EU, it is also an economically liberal country compared to the southern countries in the EU (including France). As a consequence, the face of the EU will change dramatically. For the time being, the EU seems to be occupied with itself and, despite all its efforts, still has no weight in geopolitical events.

Erosion of trust in traditional monetary arrangements

Another consequence of the geopolitical changes is the creeping erosion of trust in monetary arrangements. As elaborated upon in the chapter “De-Dollarization”, the global process of declaring independence from the US dollar as the global reserve currency continues. The biggest plus for the present currency hegemony is that there is still no serious competition from other government fiat currencies. However, the more the global reserve currency loses its trust capital, the more likely it is that fundamental values, only temporarily set aside, will again be considered as the foundation of a monetary system. Gold purchase increases and repatriations by various central banks demonstrate gold's resurgence in the global monetary order as central banks seek a dependable store of value.

The next chart shows where the erosion of trust in paper money leads in extreme cases. When paper currencies were not trustworthy in the eyes of the population anymore, they reverted to their intrinsic value, and that is zero, as has been detailed out in the guest chapter “Hyperinflation”.

Currency values relative to gold, 1900=100, 1900-2018



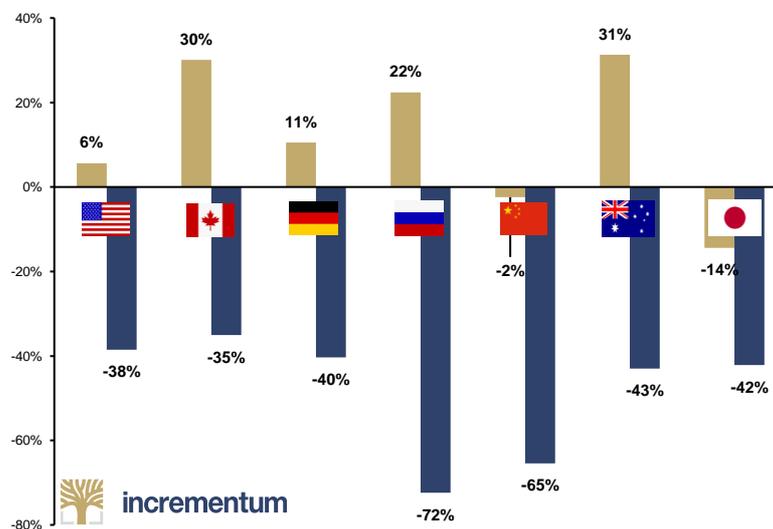
Source: World Gold Council, Harold Marcuse, UC Santa Barbara, Incrementum AG

We no longer have business cycles. We have credit cycles.
Peter Boockvar

Gold as a hedge against the erosion of trust

Throughout history and to this day, gold has shown that it is an excellent portfolio hedge against deep crises of trust. As we have analyzed extensively, this characteristic as portfolio hedge was again demonstrated in Q4/2018, when global stock prices fell sharply but gold gained 8% and mining stocks an impressive 17%. The hedging function of gold was even more apparent in the crisis year of 2008.

Annual performance of gold in local currencies vs. domestic equity markets, in %, 2008



Source: goldprice.org, Yahoo.finance, BGMI Bullion, Incrementum AG

There is hardly anything more insidious in the markets than the illusion of lasting calm.

Claudio Borio,
BIS Chief Economist

The fact that gold is still not trusted by the mainstream, however, is shown by the fact that the following positive performance figures of gold are hardly reported in the media:

- The clear outperformance of gold against most stock indices over the course of 2018, left the impression that gold continued to be on the crutch, even if gold

appreciated in absolute terms in EUR and most other currencies. In USD and yen, gold significantly outperformed the respective stock indices.

- Gold in CAD and AUD as well as the world gold price are at or close to their highs.
- Since the introduction of the euro as book money, the gold price has risen by 356%, a performance of 7.8% per annum.



Courtesy of Hedgeye

Like the weather, markets are turbulent.

Benoit Mandelbrot

Economic and monetary conditions offer sufficient arguments for a return of the upward movement of gold in USD and the continuation of upward movement as measured in other currencies:

- Economic worries are becoming greater, which could significantly reduce the opportunity cost of gold investments in the midst of a bull stock market. **Our analysis of the various phases of a recession in the chapter “Portfolio Characteristics” shows that gold was able to compensate very well for share price losses in phases 1-3 of previous recessions.**
- **High indebtedness, the zombification of the economy, and the historically still very loose monetary policy reduce the potential of bonds as diversifier.** Gold therefore appears to remain an indispensable part of the portfolio going forward.
- **The debt levels reached prevent the central banks from (further) significantly raising interest rates.** The Federal Reserve can at least respond to the deteriorating economic situation by cutting interest rates from the current target range of 2.25%-2.50%, while the ECB does not have this main monetary policy instrument at its disposal. Further rounds of QE are therefore to be expected. This is a positive environment for gold. The implementation of negative interest rates, especially if cash holdings and accounts of the general public with commercial banks are included as well, would also be a support for the gold price.

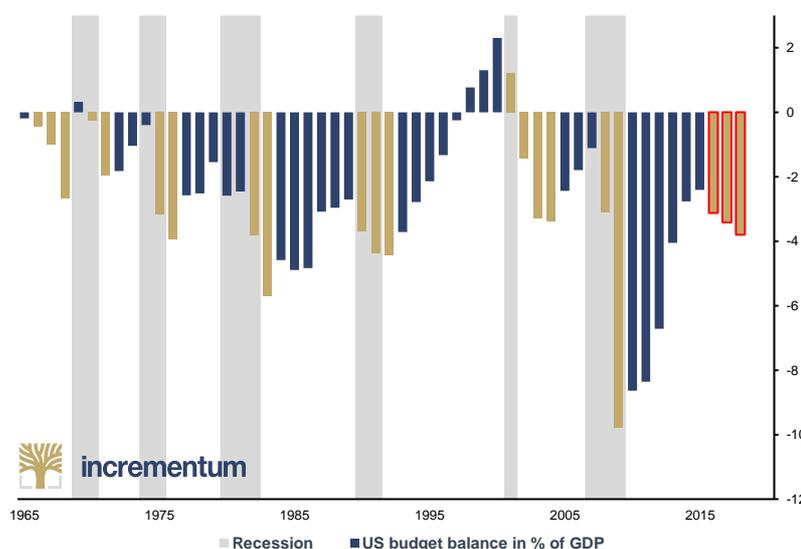
You ain't seen nothin' yet, b-b-b-baby, you just ain't seen n-n-nothin' yet, here's something that you never gonna forget, b-b-b-baby, you just ain't seen n-n-nothin' yet.

Bachman-Turner Overdrive

- **Political pressure on the Federal Reserve, but also on other central banks, will continue to increase.** Not least due to political polarization, ideas such as MMT (Modern Monetary Theory) will continue to find their way into central banking circles. Fiscal discipline, which is already limited in most countries, could thus be further weakened. The more irresponsibly the money monopoly is used to finance debt, the more trust will be withdrawn from conventional currencies.

Despite record-high tax receipts, the US budget deficit once again expanded in Fiscal 2018. This is unprecedented. **We have never seen three consecutive annual deficit increases outside of a recession.**

US budget deficits, in % of GDP, 1965-2018, US recessions (grey areas)



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

Our tour de force has also brought the following findings to light:

- **Gold and blockchain technology:** This liaison is not a brief summer flirt, but an ever closer relationship. As in any relationship, there will still be some problems to solve until the partnership is consolidated. However, we are convinced of the viability of this relationship.
- **Gold mining stocks:** After several years of creative destruction in the sector, most companies are now on a much healthier footing. The recent M&A wave reinforces our positive basic assessment. From an anticyclical point of view, there are probably few sectors that are more exciting. In our investment process we are currently concentrating on high-quality producers and mid-tiers. If the gold/silver ratio falls, silver miners should be put back on the watchlist.
- **Technical analysis:** The technical structure of the market looks predominantly positive. It will be decisive whether gold is able to break through the resistance zone at USD 1,360-1,380, the technical Rubicon of the present.

Outsiders are making the next Renaissance. Those who saddle up and fight for personal, financial, political, and economic authenticity in a world running away from its battles; running to hedonism, nihilism, fatalism, victimology, dependency, economic free-lunchism, and political shortcuts.

Russell Lamberti

- **Technological innovations:** Innovations such as AI, drones, and digitalization have not bypassed the gold sector; they are revolutionizing it. This process is far from complete and represents a major challenge for both existing and new projects. However, the gold industry has already shown that it can meet and profit from these challenges.
- **Gold is green:** Gold is a green product due to its extremely high degree of recycling. Of course, way too often working conditions could be improved and pollution reduced (problems that are not specific to the gold sector). To improve the situation, the ESG guidelines have gained a foothold in the gold sector and are no longer merely given lip service.

Quo vadis, aurum?

My favorite thing to remember is the future.

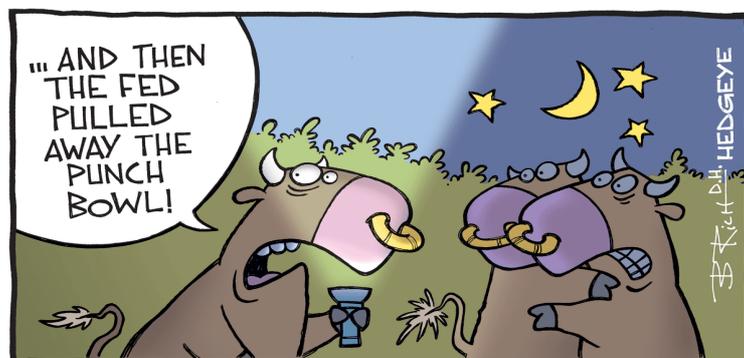
Salvador Dali

Two years ago, we developed several scenarios for gold price developments that were aligned with the dynamics of GDP growth and the further course of US monetary policy. The time horizon we applied was the term of office of the current US administration (2017-2020). The implementation of monetary normalization was also envisaged for this period.

Term period dominated by	Growth	Monetary normalization	Gold price in USD
Scenario A: Genuine boom	Real growth > 3% p.a.	Success; Real interest rates >1.5%	700–1,000
Scenario B: Muddling through	Growth & inflation 1.5-3% p.a.	Still not fully successful	1,000–1,400
Scenario C: Inflationary boom	Growth & inflation > 3% p.a.	Still not fully successful	1,400–2,300
Scenario D: Adverse scenario	Stagnation / contraction <1.5%	Stoppage & reversal of monetary policy	1,800–5,000

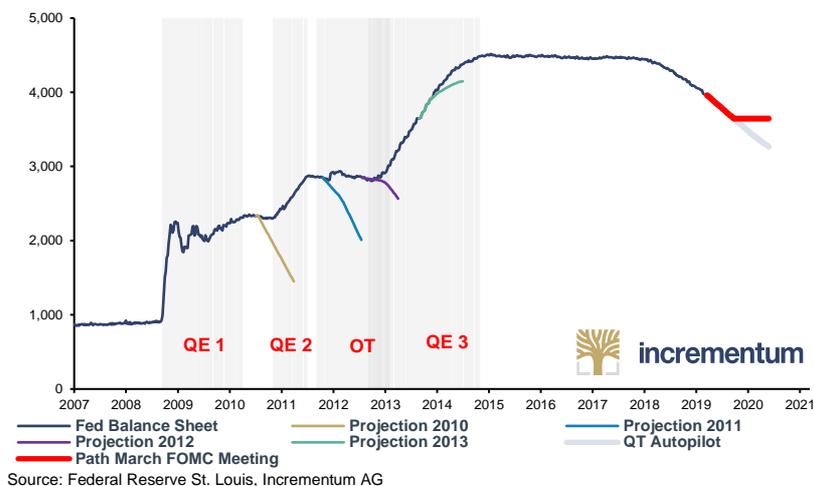
Source: Incrementum AG

Scenario B is still the one in which we find ourselves. Trust in the US as a global economic locomotive is currently *still* there, even though it was clearly tested in Q4/2018. This slump reminded us once again how quickly the mood of the markets can change. **But the crucial question is: Has monetary normalization failed?**



Courtesy of Hedgeye

Fed balance sheet path, in USD bn, 01/2007-2021e



You're gonna need a bigger boat!
Jaws

We stand by our assessment that the social climate, the economic dynamics, and the course of the public debate suggest that the Federal Reserve will initiate a turnaround in monetary policy before the next presidential election in November 2020. This turnaround, and probably just its announcement, has a good chance of being the trigger that lifts the gold price above the psychologically important resistance zone of USD 1,360-1,380. If this mark is breached, a gold price of over USD 1,800 seems within reach.

Work hard, use your common sense and don't be afraid to trust your instincts.
Fred L. Turner

Conclusion

The past 12 months have shown that the seemingly invulnerable economic upswing has begun to crack deeply. The worldwide boom, driven by low interest rates and a ceaseless expansion of credit and money, now stands on feet of clay. The probability that the boom will turn to a bust is high, or at least significantly higher than the mainstream assumes.

There were always ample warnings, there were always subtle signs and you would have seen it coming, but we gave you too much time.
"Coma", Guns N' Roses

The developing political, social, economic, and technological upheavals are enormous. On many fronts confidence in the existing order is crumbling, while the new order has not yet gained enough trust to have a stabilizing effect. This trend will intensify in the coming years. **In addition, the bubbles in the equity, bond, and real estate markets – the Everything Bubble – and the corrosive dynamic of overindebtedness further exacerbate the fragility of markets – month after month, week after week, day after day.**

We expect significant upheavals in the coming years, with a substantial impact on the gold price. As you know from reading us for many years, we will follow these events closely, analyze them in detail, and comment on them regularly.

And that is why, in this age of the erosion of trust, we still say:

IN GOLD WE TRUST

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 in 2007 he published his first *In Gold We Trust* report. Over the years, the *In Gold We Trust* 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*”, and in 2019 “*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.

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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.

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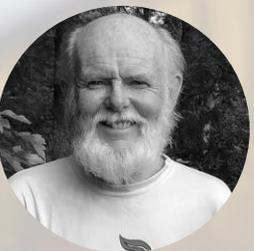
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Incrementum AG

Incrementum AG is an independent investment and asset management company based in Liechtenstein. Independence and self-reliance are the cornerstones of our philosophy, which is why the four managing partners own 100% of the company. Prior to setting up Incrementum, we all worked in the investment and finance industry for years in places like Frankfurt, Madrid, Toronto, Geneva, Zurich, and Vienna.

We are very concerned about the economic developments in recent years, especially with respect to the global rise in debt and extreme monetary measures taken by central banks. We are reluctant to believe that the basis of today's economy, i.e. the uncovered credit money system, is sustainable. This means that particularly when it comes to investments, acting parties should look beyond the horizon of the current monetary system. 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.**

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