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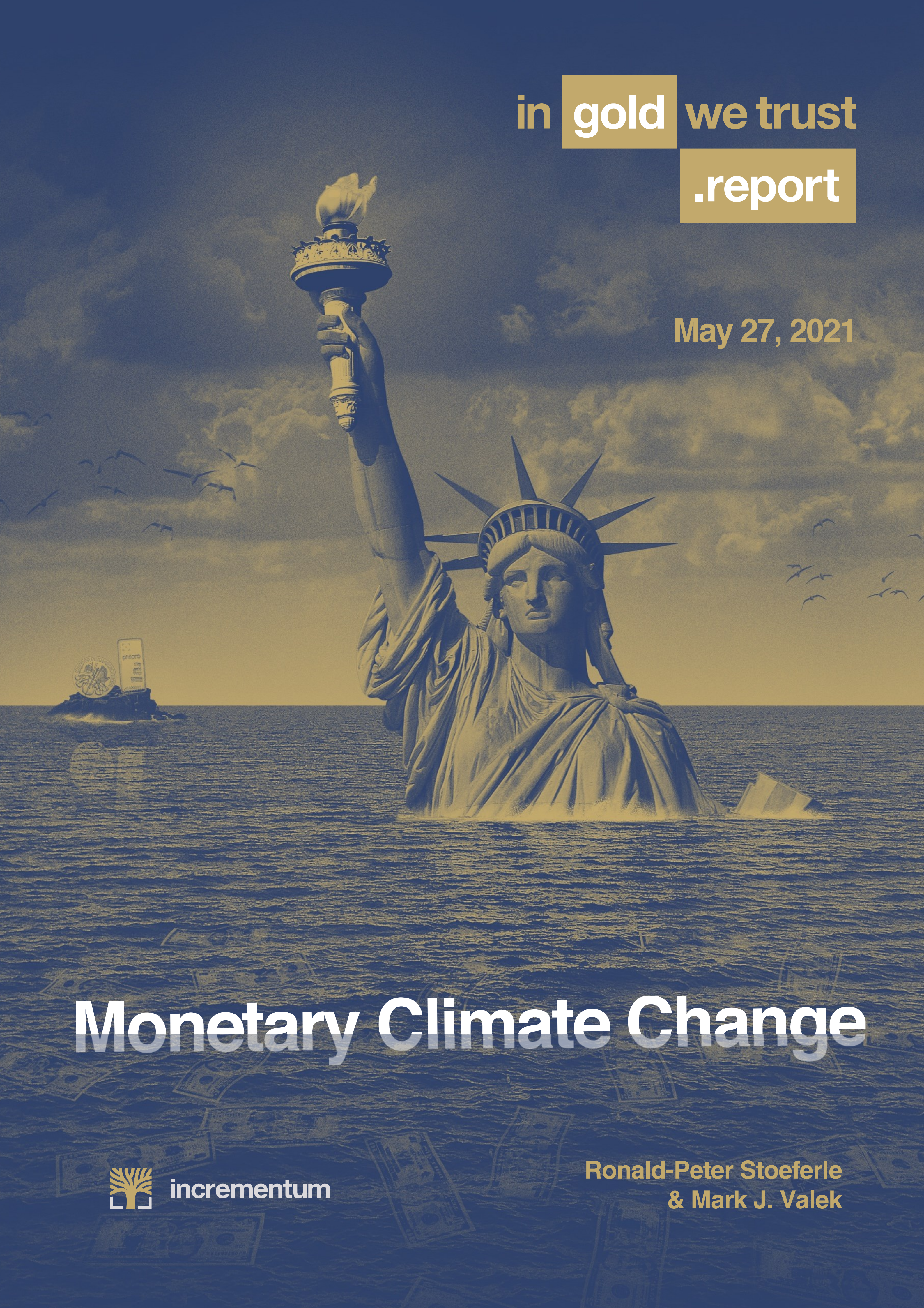

Monetary Climate Change

incrementum

Ronald-Peter Stoeferle
& Mark J. Valek

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Contents

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Introduction

"An idea is like a virus. Resilient. Highly contagious. And even the smallest seed of an idea can grow. It can grow to define or destroy you."

Dominic Cobb, Inception

Key Takeaways

- This year marks the 50th anniversary of the Nixon Shock when the last peg between money and gold was severed. This event ushered in the era of debt-based money and allowed central banks to create money without restrictions.

- A monetary climate change is taking place right before our eyes. We identify three key aspects to this change: budgetary nonchalance, the merging of monetary and fiscal policy and the creation of new tasks for monetary policy.

- In our view, the inflation pendulum finally swung back in the previous year, and inflationary forces are now stronger than deflationary ones.

- We are likely moving into a period of inflation caused by strongly rising money supply growth. Consequently, more and more central banks will be forced to implement a policy of explicit or implicit *yield curve control*. Real interest rates will thus remain negative.

- We continue to our forecast based on our *proprietary gold price model* presented in last year. The conservative baseline scenario has resulted in a price target of USD 4,800 for gold at the end of the decade.

- After hibernating for years, commodity prices have now awakened. In such a market environment, tangible assets, especially commodities, selected equities in the right sector, and obviously precious metals should form the solid basis of the portfolio.

Courtesy of Hedgeye

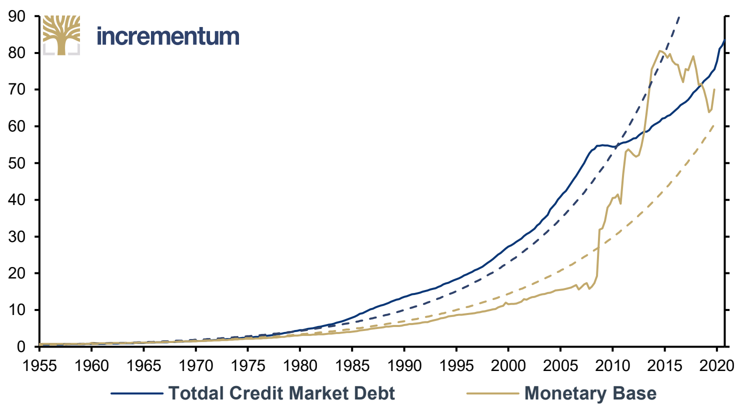
Climate change and the associated striving for a "more sustainable economy" are omnipresent issues today. From energy production and mobility to the food industry and retail, to government bonds and investment funds, everything imaginable is given predicates such as "green", "sustainable" or "climate-neutral". *ESG*[1] and *SRI*[2] have become winged acronyms that no one seems able to elude.

Of course, efforts aimed at structural improvement in the areas of environment, social affairs, and corporate governance are welcome. From our point of view, however, the considerations have a serious shortcoming. **They do not include the foundation of the current economic system in their consideration: the debt-based monetary system.**

Climate change is something misunderstood as being about changes in the weather. In reality it is about changes in our very way of life.
Paul Polman

This year marks the 50th anniversary of its birth – ironically, the final separation of the world monetary system from gold will celebrate its *golden wedding* in a few weeks. As our loyal readers know, the last peg of the US dollar to gold was severed on August 15, 1971, which completely dematerialized the global monetary system. Since then, no currency has been backed by a scarce asset like gold. Central banks can create money without any restrictions and are increasingly making use of this privilege. **Various money supply and debt aggregates have been rising exponentially ever since**.

Total Credit Market Debt (lhs), in USD trn, and Monetary Base (rhs), in USD trn, Q1/1955-Q4/2020



Source: Reuters Eikon, Incrementum AG

In the *In Gold We Trust* report 2019, our leitmotif was *trust*.[3] Currencies are based on a triad of stability, credibility and confidence.[4] In our opinion, this trust in the future purchasing power of money is on the brink of collapse, as currently evidenced by the crack-up boom-like developments in the financial markets. Ultimately, the public's trust in unbacked currencies stands or falls on whether central banks do not abuse the money-creation privilege, for example for covert government financing. But it is precisely in this context that we are

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[1] "Environmental, social, governance" – ESG is used as a broad term for CSR (corporate social responsibility). In other words, the voluntary contribution of business to sustainable development that goes beyond the legal requirements.
[2] Socially responsible investing (SRI), also referred to as social investment, is an investment that is considered socially responsible because of the type of business the company conducts.
[3] *See* "Gold in the Age of Eroding Trust", *In Gold We Trust* report 2019
[4] *See* "3. Währungen und Werte" ("3. Currencies and Values"), *Studienreihe*, Donner & Reuschel, February 24, 2021

registering those fundamental changes that, taken together, paint the picture of a *monetary climate change*.

What exactly do we mean by *monetary climate change*? We are alluding to a multilayered paradigm shift, the breakthrough to which was triggered by the pandemic and the political reactions to it. **The following developments are an expression of this profound change:**

In short, austerity is out.
Henry Maxey

1. **Budgetary nonchalance**
   Fiscal conservatism has been in retreat for some time. In the euro area, the credo of the frugal Swabian housewife still prevailed in the aftermath of the Greek crisis – especially at the instigation of Germany. But since the onset of the pandemic, governments have embraced their role as big spenders more enthusiastically than ever. Whether it is debt-financed subsidies for "green" companies or permanent transfer payments to ever larger parts of the population, there are more and more goals that are seen as so important that higher debt is accepted for them. The ultimate constraints, such as the US debt ceiling, the Maastricht criteria of the European Union, and other national debt brakes are suspended, interpreted generously, or simply ignored – après nous le déluge. This permissive fiscal zeitgeist also has significant implications for monetary policy.

We want to change the game.
Janet Yellen

2. **Merging of monetary and fiscal policy**
   This new fiscal dominance is accelerating the merging of monetary and fiscal policy. Emblematic of this is the appointment of former Federal Reserve Chair Janet Yellen as US Treasury secretary and former ECB President Mario Draghi as Italian prime minister. Even the central bank governors of the former hard-currency countries in the euro zone are now encouraging the responsible budget politicians to run even higher deficits.[5] Consequently, a successively higher share of the deficits must be financed via the digital printing press. More and more aspects of the Modern Monetary Theory[6] now seem to be subjected to a practical test. But the political independence of central banks has always been the institutional guarantor of confidence in the stability of the currency. The closer this liaison between monetary and fiscal policy grows, and the longer it persists, the greater the likelihood of a loss of confidence.

Unless we take action on climate change, future generations will be roasted, toasted, fried and grilled.
Christine Lagarde

3. **New tasks for monetary policy**
   Safeguarding price stability has always been considered the primary objective of an independent central bank. Increasingly, one gets the impression that central bankers are speaking out more often on issues such as sustainability, climate change, or diversity than on monetary policy matters. For example, ECB President Christine Lagarde, against all custom, made a public statement of support for the Green Party's top candidate in the upcoming German federal election. The self-designation of central bankers as *monetary guardians* therefore seems out of date.

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[5] *See* Ferber, Michael: "Völlige Enthemmung der Geld- und der Finanzpolitik", ("Complete Disinhibition of Monetary and Fiscal Policy"), Neue Zürcher Zeitung, December 5, 2020
[6] *See* "The Dawning of a Golden Decade", *In Gold We Trust* report 2020, "Gold in the Age of Eroding Trust", *In Gold We Trust* report 2019

Moreover, the criteria for price stability are being redefined in many places. The Federal Reserve has already taken this step by switching to "average inflation targeting" (AIT) in the summer of 2020, while the ECB is currently reviewing its monetary policy strategy. In our view, it is very likely that the ECB's price stability target, which is considered sacrosanct, will be softened in the future.

4. **Central bank digital currencies vs. decentralized cryptocurrencies**

CBDCs show a strong contrast from the ethos of cryptocurrencies in that they are issued by the state as a centralized form of digital money.
Kraken Intelligence

One aspiration of many central banks is to hastily introduce a central bank digital currency (CBDC). In our view, CBDCs are a wolf in sheep's clothing. It seems as if the excitement around "digital assets" is being exploited to market state-owned digital currencies as a great achievement. In fact, these would enable the implementation of even deeper negative interest rates as well as permit the most extensive pushback against anonymous cash that we have yet witnessed. The advent of CBDC's would mark a milestone on the road to the transparent citizen.[7] A recently published study by Kraken appropriately refers to digital central bank currencies as "*digitized fiat currency*".[8] The antidote to CBDCs are noninflationary, decentralized cryptocurrencies, which will continue to flourish as a consequence of monetary climate change and increasingly become the focus of the mainstream.[9]

5. **The new ice age between East and West**

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

The secular divergence, especially between the US and its allies on the one hand and China and Russia[10] on the other, already existed before the pandemic but has recently accelerated. The steady cooling of diplomatic relations has had a marked impact on the economic situation of the respective states. But Europe was also divided rather than welded together by the Covid-19 crisis. Both a north-south division and an east-west division (Western Europe vs. the Visegrád states) can be observed. Monetary climate change also has far-reaching consequences at the level of international monetary policy. The quest for new trading and reserve currencies continues to grow, and de-dollarization is advancing. Gold plays a central role in this emancipation from the US dollar.

From Asset Price Inflation to Consumer Price Inflation

We are seeing very substantial inflation.
Warren Buffett, May 2021

Meteorological climate change carries the risk of sea level rise. A side effect of *monetary* climate change is the almost unlimited wave of liquidity that has been flooding the markets since the beginning of the Covid-19 pandemic and that is already causing a noticeable increase in both asset price levels and consumer price levels. Possibly one of the most dramatic consequences that the new monetary climate could bring is the renaissance of consumer price inflation. **In our opinion, we are currently only in the early stages of this inflationary development.**

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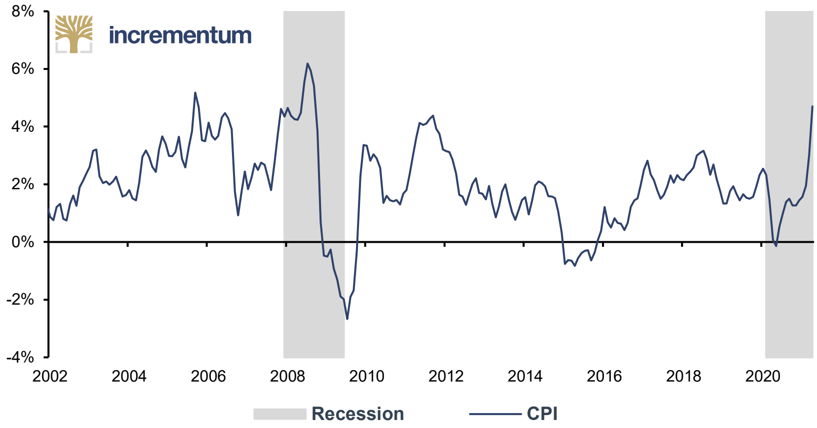
[7] *See* "Central bank digital currencies", BIS, Committee on Payments and Market Infrastructures, March 2018
[8] *See* "The rise of Central Bank Digital Currencies", Kraken Intelligence, April 2021
[9] We recently started offering two fund strategies that invest in both gold and bitcoin. Further information can be found on Incrementum.li.
[10] *See* Doff, Natasha and Biryukov, Andrey: "Russia Ditches the Dollar in More Than Half of Its Exports", Bloomberg, April 26, 2021

CPI, yoy%, 01/1960-04/2021



Source: Reuters Eikon, Incrementum AG

Courtesy of Hedgeye

At the heart of the narrative of central banks regarding current inflationary dynamics is one term: *temporary*. For example, the most recently added member of the Federal Reserve's Board of Governors, Christopher Waller, made the following statement: "*Whatever temporary surge in inflation we see right now is not going to last.*"[11] Federal Reserve Chairman Jerome Powell consistently conveys the same message. On this side of the Atlantic, ECB President Christine Lagarde is also tooting the same horn. **We look to the future with great interest and concern in the coming months and years, as it becomes clear whether the current surge in consumer price inflation is temporary or permanent.**

Ideas and products and messages and behaviors spread like viruses do.
Malcolm Gladwell

In this context, it is worth studying the book *The Tipping Point, How little things can make a big difference*,[12] by Malcolm Gladwell. Gladwell defines a *tipping point* as "*the moment of critical mass, the threshold, the boiling point*". The media regularly warn of irreversible tipping points being reached in manmade climate change. That such tipping points loom in the context of monetary climate change – a reversal of inflation expectations or even broad erosion of confidence in the monetary foundation – is not even considered by the bulk of market participants, policymakers and economists. **In our view, the inflation pendulum has finally swung back in the past year, and inflationary forces are now stronger than deflationary ones.**

The Boy Who Cried Wolf

In fall 2020 we were prompted for the first time to publish an *In Gold We Trust* special entitled "The Boy Who Cried Wolf: Is an Inflationary Decade Ahead?".[13] Aesop's parable describes how villagers simply ignored a renewed warning of a wolf following false alarms from a shepherd boy. Something similar is currently happening on the part of savers and investors in connection with the danger of a wave of inflation. In our special report we showed why inflationary forces are now finally gaining the upper hand. **In this *In Gold We Trust* report, we will again look at the complex issue of inflation from different angles.**

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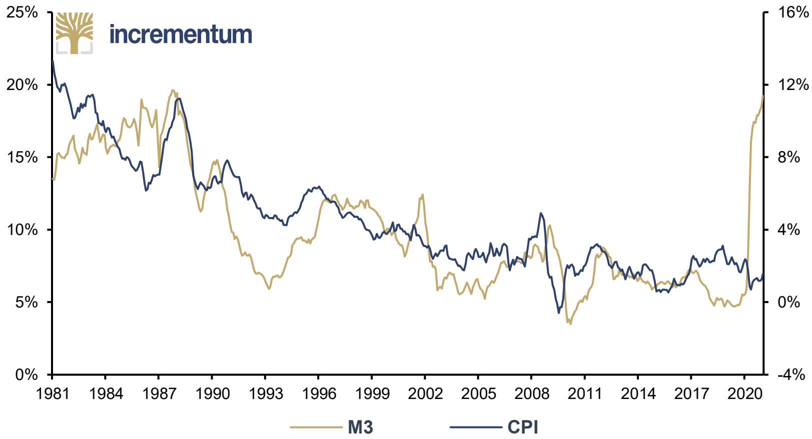
[11] Saphir, Ann and Marte, Jonnelle: "Fed's Waller says U.S. economy is 'ready to rip'", Reuters, April 16, 2021
[12] Gladwell, Malcom: *The Tipping Point: How Little Things Can Make a Big Difference*, 2000
[13] *See* "The Boy Who Cried Wolf: Is An Inflationary Decade Ahead?", Incrementum, November 30, 2020

One obvious reason for strongly rising inflation rates in the coming months is the historic increase in the M3 money supply in many parts of the world.

OECD M3 (lhs), yoy%, and OECD CPI (rhs), yoy%, 01/1982-01/2021



Source: Federal Reserve St. Louis, Incrementum AG

In the past couple of decades, the 2% inflation target behaved like a ceiling. In the next twenty years, the 2% inflation target will become a floor.
Kevin Muir

Another point for understanding why inflation will be with us for longer is the development of the velocity of money. As the population's confidence slowly returns, the velocity of money will normalize, which is why inflation could pick up noticeably. **Central banks would have to withdraw liquidity from the system as uncertainty fades and the velocity of money increases.** In our opinion, however, their doing so is as likely as a Dutch skier winning the famous Alpine downhill race in Kitzbühel, Austria.

The cycle of manias and panics results from procyclical changes in the supply of credit. (…) Money always seems free in manias.
Charles Kindleberger

In 1933 and 1946, the velocity of money was similarly low, and in both cases the US government resorted to radical measures. In January 1934, it devalued the US dollar against gold by almost 70%, and in the period 1946–1951 it enforced financial repression in cooperation with the Federal Reserve, which capped interest rates at a low level. Both times, this massive intervention resulted in significantly higher inflation rates in the years that followed. **Currently, the velocity of money is at even lower levels than in 1933 or 1946. We expect history to repeat itself and central banks to seek their salvation in financial repression.**[14]

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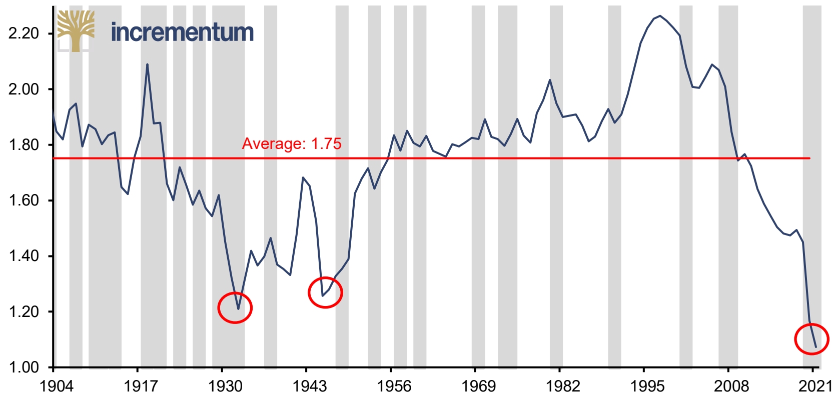
[14] *See* "EMA GARP – Report for the first quarter", Equity Management Associates, Q1/2021

M2 Velocity, Q1/1900-Q1/2021



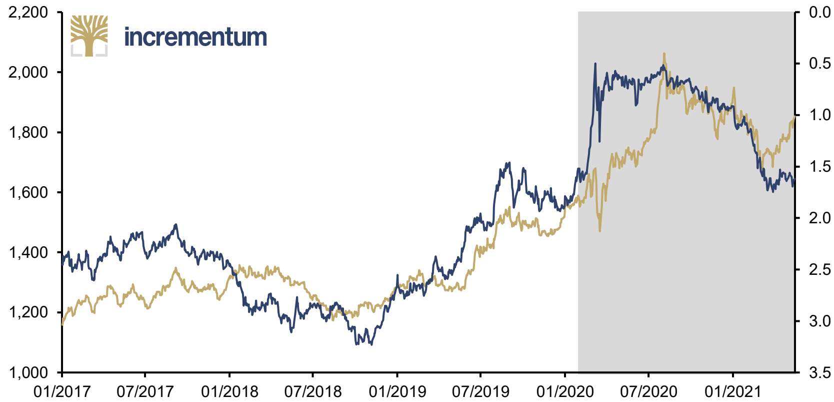
Source: Reuters Eikon, Incrementum AG

The Interest Rate Turnaround and Bitcoin as Swords of Damocles Over the Gold Price?

Everyone hates gold. I learned a new line from some traders on my desk: "Gold will make you old", and I can attest to its truth, as over the past few months, I feel as old as Yoda.
Kevin Muir

Many gold investors are surprised that the gold price has been in a consolidation phase since last summer. In our view, one of the key reasons is rising US yields. Classically, the yield curve reflects the expected path of interest rates. In August 2020, the yield curve started to turn at the long end, creating significant headwinds for the gold price. **The gold price already appears to be discounting medium-term rate hikes, while eurodollar futures see an 80% chance of a rate hike by December 2022.**

Gold (lhs), in USD, and UST10Y (rhs, inverted), in %, 01/2017-05/2021



Source: Reuters Eikon, Incrementum AG

One day, central banks will decide that they now need to support their currencies instead of supporting their bond markets. In this scenario, bond markets will implode.
Louis-Vincent Gave

However, a look at the past proves that the gold price can perform strongly even when nominal yields rise, **especially when inflation rates rise faster than interest rates.** Nevertheless, rising yields pose risks for the gold price in the short term, as long as it is not clear how the inflationary trend will develop. When market participants realize that real interest rates will remain low or even fall further – despite rising nominal yields – the gold bull market should continue.

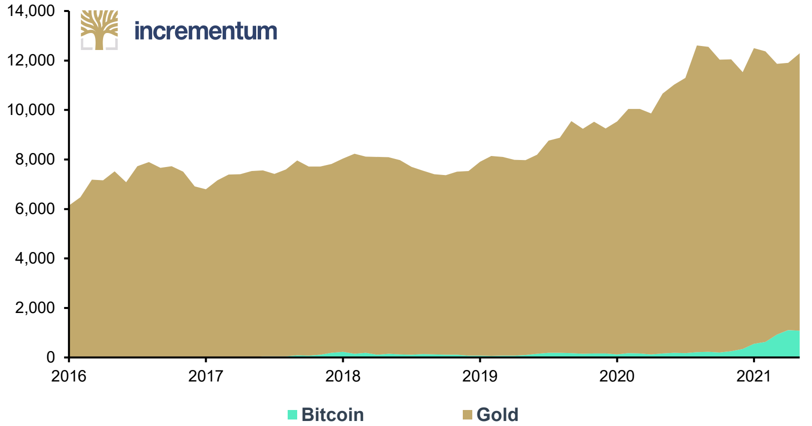
More money has been lost reaching for yield than at the point of a gun.
Raymond DeVoe Jr.

The fact that rising bond yields trigger nervousness in the markets was confirmed in March, when yields on 10-year US Treasuries rose to 1.75%. As soon as the *feel-good zone* of inflation is left behind and higher inflation expectations become anchored, major dislocations in the bond markets are inevitable. More and more central banks will be forced to implement a policy of explicit or implicit *yield curve control*.[15] **This would be tantamount to *quantitative easing* without quantity restrictions.** Central banks would have to promise to buy as many government bonds as needed to cap yields.

Is BTC a threat to the status quo, post-1971 USD system? Absolutely. The more important question is "Is the status quo, post-1971 USD system actually good for the US anymore?"
Peter Thiel

Another explanation for the partly disappointing development of the gold price in recent months is the increasing acceptance of Bitcoin in the traditional financial sector. Indeed, it seems that Bitcoin as a noninflationary store of value is slowly being adopted by institutional investors as well. It stands to reason, therefore, that Bitcoin – and other cryptocurrencies – have absorbed funds that traditionally would have gone into gold investments. In our view, however, this effect has not been decisive for the price development of gold, but neither has it left the gold market entirely unscathed.

Market Capitalization of Gold and Bitcoin, in USD bn, 01/2016-05/2021



Source: Reuters Eikon, World Gold Council, coinmarketcap.com, Incrementum AG

Think about it: Every time a Bitbug refers to crypto as "the new gold" or "digital gold", they are paying a compliment to gold.
Thomas Kaplan

Will digital gold now replace physical gold as an investment? No, it will not. We remain convinced that physical gold will continue to play a fundamental role in asset management in the future, as its portfolio characteristics are unique and the fascination it has always exerted on people remains unbroken. **Nevertheless, it makes sense to look at digital stores of value, especially in times when old assets are in danger of being devalued while new assets are being created.**

We have been following the Bitcoin phenomenon since 2015 as part of our *In Gold We Trust* report. In 2019, we made a plea for an admixture of Bitcoin to a gold portfolio in a chapter devoted to that topic.[16] Consistent with that view, we launched an investment strategy as a fund in early 2020, a fund that we are convinced is superior to an individual investment in gold – or in Bitcoin – in many

[15] The Reserve Bank of Australia, for example, has already introduced a YCC. The RBA not only announced its intention to keep the current policy rate stable until 2024 but also committed to a 3-year yield target of 0.10% to keep borrowing costs low for the foreseeable future.
[16] *See* "Gold and Bitcoin: Stronger Together?", *In Gold We Trust* report 2019

respects. We provide a detailed account of the results of the strategy to date in this *In Gold We Trust* report.[17]

What's Next? Yield Curve Control and Financial Repression

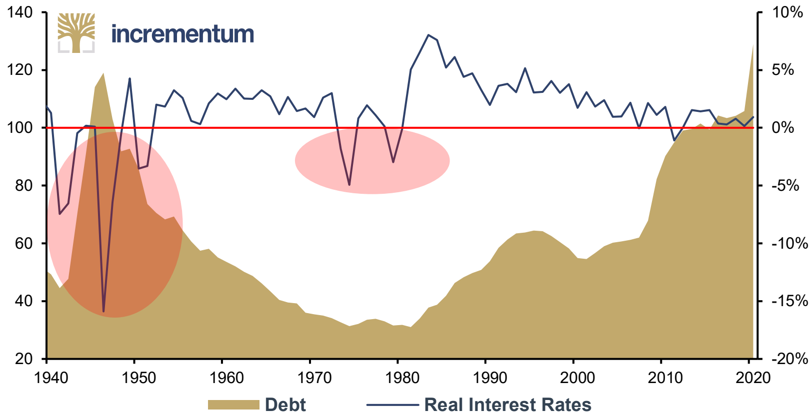
The death of inflation has been greatly exaggerated.
Henry Maxey

We know this: Public debt in many countries is at its highest level in peacetime. Among the G7 countries, only Canada and Germany have debt ratios of less than 100% of GDP, although even these two countries have significantly higher debt ratios if implicit debt, (e.g., pension entitlements) is added. **How will the G7 states be able to overcome this debt situation?**

I'm kind of in a position that FDR was (…) What in fact FDR did was not ideological, it was completely practical.
Joe Biden

A look at the history books might answer the question. The US ended World War 2 with debt at nearly 120% of GDP, while in the UK it stood at 250%. By the early 1970s, the debt-to-GDP ratio had fallen to about 25% in the US and below 50% in the UK. How was this achieved? The answer: by financial repression, i.e., by capping the yield on government bonds – significantly – below the rate of inflation.

Gross Federal Debt (lhs), in % of GDP, and Real Interest Rates (rhs), 1940-2020



Source: Reuters Eikon, Federal Reserve St. Louis, Nick Laird, goldchartsrus.com, Incrementum AG

Successful financial repression requires a widespread belief that conventional government bonds are safe.
Peter Warburton

After all, the control of the yield curve is by no means new. In 1942, the Federal Reserve made a commitment to the US Treasury to buy enough bonds to cap interest rates at 0.375% for short-term bills and 2.5% for 10-year Treasuries. This significantly mitigated the financing costs of World War 2. This cap remained in place until 1951, with inflation averaging 5.8% per year during this period and as high as 20% in the years immediately following World War 2. As a result, real interest rates were deeply negative and the debt-to-nominal-GDP ratio was able to shrink back to an acceptable level.[18] **Conveniently, the Federal Reserve gives itself the legitimacy for future yield curve control:**

> *"The period 1942–47 provides some evidence that the Federal Reserve can lower long-term rates by committing to keeping short-term rates low. The brief period from 1947 to 1948 may also provide additional evidence that long*

[17] *See* chapter "Bitcoin & Gold – Our Multi-Asset Investment Strategy in Practice" in this *In Gold We Trust* report.
[18] *See* "Jurassic Risk and the chomping of the traditional balanced portfolio", *Ruffer Review*, March 2, 2021

rates can be reduced by direct interventions in the market for long-term Treasuries."[19]

However, there is one major difference: In 1942, 84% of all Federal Reserve liabilities were backed by gold. At that time, the US owned almost a quarter of the world's gold. Our friend Daniel Oliver concludes:

"If inflation breaks out and market rate for Treasuries jumps above the Fed's targets, it will have to purchase the entire stock to control rates. There is no doubt the Fed can do this, but it would herald the final end of the dollar."[20]

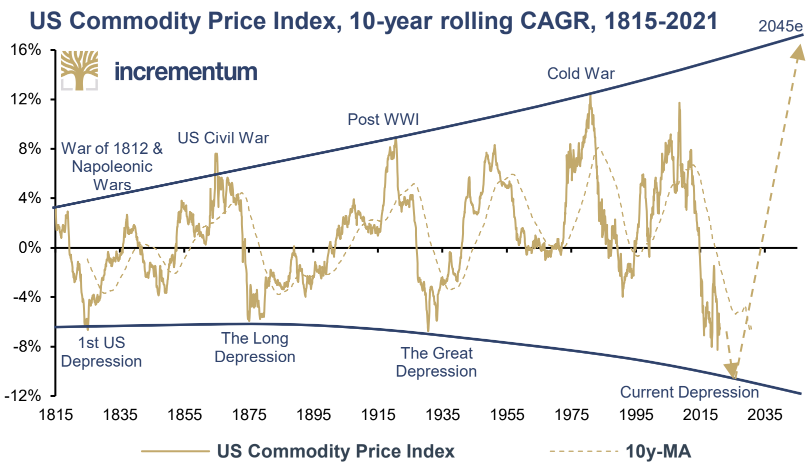
Winners and Losers

Like the weather, markets are turbulent.
Benoit Mandelbrot

A *meteorological* climate change can have both negative and positive effects on the population, depending on the region and the field of economic activity. ***Monetary* climate change poses risks to investors, but offers also opportunities.** Last year, we wrote in this context:

*"**It is very possible that experimental monetary policy will trigger a renaissance of hard assets.** If that thesis is correct, the battered commodity sector should also offer opportunities to courageous contrarian investors."*[21]

After hibernating for years, commodity prices have now awakened. It is quite possible that the 2010s will turn out to be the 1960s and the 2020s the 1970s. In our view, at any rate, the indications are clearly intensifying that the entire area of inflation-sensitive assets could be at the beginning of a pronounced bull market.



Source: Stifel Report, Incrementum AG

As uncomfortable as the dynamics are in general, the conditions for gold could not be better: massively over-indebted economies that will resort to devaluing their currencies as a last resort to reduce their debts. We believe that real interest rates will remain in negative territory for the next decade. **In such a market environment, tangible assets, especially commodities, selected equities**

[19] Carlson, Mark et al.: "2. Federal Reserve Experiences with Very Low Interest Rates: Lessons Learned", *FOMC Memo*, December 5, 2008, p. 14
[20] Oliver, Daniel: "The Slingshot", Myrmikan Research, July 13, 2020, p. 6
[21] "Introduction", *In Gold We Trust* report 2020, p. 13

in the right sector, and obviously precious metals should form the solid basis of the portfolio.

The Golden Decade

The 15th edition of our *In Gold We* report[22,23] comes at a time marked by "*zozobra*"[24], a Spanish term reminiscent of the swaying of a ship in danger of capsizing. This term originated among Mexican intellectuals in the early 20th century to describe the feeling of not having solid ground under one's feet and feeling out of place in the world. In our opinion, gold has recently proven once again to protect saved assets against these latent uncertainties.

Trust comes on foot and flees on horseback.
Dutch proverb

Trust comes from repeatedly fulfilling expectations. In the previous year, gold once again demonstrated its sensitive seventh sense and justified the trust placed in it. It warned the attentive observer that the major weather situation was about to turn.[25] **In anticipation and reaction to the fiscal and monetary largesse, gold "delivered" during the calendar year 2020 in US dollars, gaining 24.6%. In euro terms, gold rose by 14.3% and marked new all-time highs in numerous other currencies.**

If you think that you're living in the best of all worlds, then you don't need gold.
Daniel Briesemann

In the wake of monetary climate change, a new approach to debt and the digital printing press is spreading. The probability that this decade will go down in history as an inflationary decade has increased significantly, particularly because the inflationary dynamics already in evidence have proceeded without any significant acceleration in the velocity of money. The potential for a significant rise in inflation in the coming years should not be disregarded.

I believe that the times ahead will be radically different from the times we have experienced so far in our lifetimes, though similar to many other times in history.
Ray Dalio

But what does a world with significantly higher inflation rates mean for the gold price? Should inflation rise significantly in the coming years, we believe that five-digit gold prices are conceivable at the end of the decade. Such a scenario would be compatible with further strong increases in Bitcoin prices. Noninflationary assets such as gold, silver, and consumer commodities, but also scarce digital assets are increasingly in demand as stores of value in an environment with clearly negative real interest rates; and the price expressed in paper-money currency is being driven up by a glut of fiat money.

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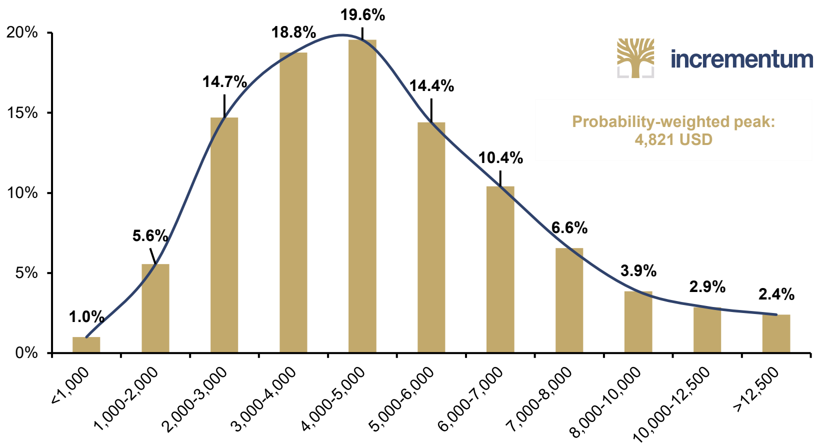
22 All 14 previous issues of the *In Gold We Trust* report can be found in our archive at https://ingoldwetrust.report/archive/?lang=en.
23 This is the abridged version of the *In Gold We Trust* report 2021. You can download the entire 350 pages of the *In Gold We Trust* report 2021 free of charge at https://ingoldwetrust.report/download/12773/?lang=en.
24 See "Feeling disoriented by the election, pandemic and everything else? It's called 'zozobra,' and Mexican philosophers have some advice", yahoo!news, November 2, 2020
25 Stoeferle, Ronald: "Gold – The 7th Sense Of Financial Markets", presentation: Precious Metals Summit, November 11, 2019

Approximated Gold Price in 2030 by Distribution Probability, in USD



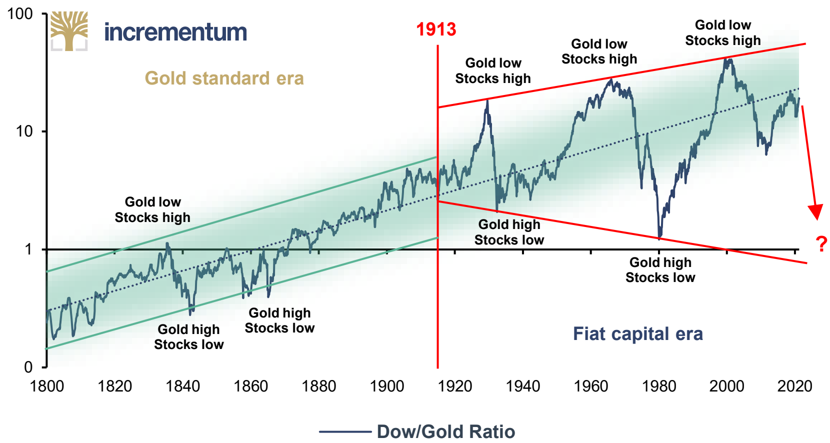
Source: Incrementum AG

An environment of constrained yields, rising inflation and a weaker US dollar is manna from heaven for gold bulls.
Louis-Vincent Gave

We therefore continue to adhere to our last year's price forecast for the gold price at the end of the decade, based on our proprietary gold price model presented in last year's *In Gold We Trust* report. The conservative base scenario, i.e. without any extraordinary inflationary tendencies, results in a price target of USD 4,800 for gold.[26]

Gold's price potential is significant not only in absolute terms, but also relative to other asset classes. For example, the Dow/gold ratio, which we pay a lot of attention to, seems to have recently completed its post-Covid-19 rally and could now start resuming its downward trend.

Dow/Gold Ratio (log), 01/1800-04/2021



Source: Nick Laird, goldchartsrus.com, Reuters Eikon, Incrementum AG

[26] *See* "Quo vadis, aurum?", *In Gold We Trust* report 2020

Thank you very much!

A strong passion for any object will ensure success, for the desire of the end will point out the means.
Henry Hazlitt

Year after year, the *In Gold We Trust* report strives to be the world's most comprehensive, widely recognized, and enthusiastically perused. Our thanks go first and foremost to our premium partners.[27] Without their support, it would not be possible to make the *In Gold We Trust* report available free of charge in this form. At the same time, we would like to express our heartfelt thanks to our more than 20 fantastic colleagues for their energetic and tireless efforts!

95% of all financial history happens within two standard deviations of normal, and everything interesting happens outside of two standard deviations.
Ric Kayne

Studying, understanding, and appreciating the past is critical to preparing for the future. **Understanding and preparing for "monetary climate change" is, in our view, the key analytical challenge of the present.** That is why this year, in these remarkable but unsettling times, we have again produced a multilayered analysis of gold's past, present and future. **We hope to give you once again, valued reader, a comprehensive, informative and entertaining guide to gold investing.**

Now we invite you on our annual tour de force and hope you enjoy reading our 15th *In Gold We Trust* report *as* much as we enjoyed writing it.

With warm regards,

Ronald-Peter Stoeferle and Mark J. Valek

27 At the end of the *In Gold We Trust* report you will find an overview of our premium partners, including a brief description of the companies.

The Status Quo of Gold

"Everything you need to know is right there in front of you."

Jesse Livermore

Key Takeaways

- Over the past 12 months, gold has reached new all-time highs in almost all currencies. With a gain of 24.6%, gold's performance in 2020 was stellar in US dollar terms, weaker in euro terms at 14.3%, but still well into double digits.
- The US dollar is in a secular bear market. Commodity prices will experience strong support if the US dollar continues to tend toward weakness.
- Inflationary pressures are intensifying and there is no end in sight to the upward pressure on prices. Combined with the impossibility of significant interest rate hikes, negative yields will continue to be in place, which also allows the debt burden to be mitigated by recourse to the inflation tax.
- The Covid-19 pandemic added about USD 24trn to the global debt mountain last year. It has now reached a record level of USD 281trn, and the global debt-to-GDP ratio now exceeds 355%.
- As soon as yields and inflation expectations rise sustainably, the correlation between bonds and equities will turn positive. If that happens, the 60/40 portfolio would be deprived of its basis – namely a negative correlation between equities and bonds.
- Currently, government bonds to the tune of USD 12.2trn are traded with negative interest rates, an amount that is roughly equivalent to the GDP of the entire EU excluding the Netherlands. For bondholders, inflation is likely to be the pain trade of the decade.
- ETF demand proved robust last year – despite a period of weakness in Q4. ETFs recorded record inflows of 877 tonnes, equivalent to a quarter of annual gold production.

Learn from yesterday, live for today, hope for tomorrow. The important thing is not to stop questioning.
Albert Einstein

In this year's *In Gold We Trust* report, we again begin our long journey through the gold universe with a detailed analysis of the most important influencing factors. Especially in times of upheaval, a comprehensive assessment of the situation is important. This applies to everyone personally, as well as to the macroeconomic big picture. Therefore, on the following pages we want to analyze the status quo of gold from as many different perspectives as possible.[28]

Good analysis comes from good understanding. And good understanding is provided by a conceptual framework that helps you organize your thinking.
Stephen H. Penman

In contrast to most gold analysts, we consider the exclusive analysis of supply/demand statistics to be of little help in understanding the gold price development. Gold is both a commodity with a high stock-to-flow ratio and a monetary metal.[29] As such, the decisive short- and medium-term factors that ultimately affect price developments are closely related to the current situation of the monetary system and the financial markets. **In our analysis, we therefore focus primarily on the following factors:**

- Trends of the US dollar and other fiat currencies
- Opportunity costs (shares, bonds…)
- Commodity price trends
- Inflation trends and inflation expectations
- Level and trend of real interest rates
- Dynamics of the debt situation
- Trend and momentum of money supply growth
- Confidence in central bank policy, the stability of the financial system, and economic development
- Confidence in politics and fiscal stability
- The geopolitical framework
- The technical setup (positioning, sentiment…)

—
[28] All previous issues of the *In Gold We Trust* report can be found in our archive.
[29] *See* "Gold and Inflation", *In Gold We Trust* report 2015; "The Stock-to-Flow Ratio as the Most Significant Reason for Gold's Monetary Importance", *In Gold We Trust* report 2014; "Stock-to-Flow Ratio as the Most Important Reason for Gold's Monetary Importance", *In Gold We Trust* report 2013

Status Quo of Gold in the Currency Context

> *"Think about currency allocation, not just asset allocation."*
>
> Bridgewater Associates

Traditionally, we start our assessment by looking at the most important performance data. Over the past 12 months, gold has reached new all-time highs in almost all currencies, including, among others, USD, EUR, JPY, CHF, CNY, AUD, CAD, and GBP. Thus, the "market breadth" of the gold bull market continued to be excellent.

Performance of gold, 2020

	USD (oz)	EUR (oz)	JPY (g)	GBP (oz)	CAD (oz)	CHF (oz)	INR (10g)	RMB (g)	AUD (oz)
Performance 2020	24.6%	14.3%	18.4%	20.8%	22.4%	13.8%	27.6%	17.0%	13.5%
Price on December 31, 2020	1,888	1,543	6,266	1,381	2,405	1,669	44,353	396.9	2,446
All-time high	2,067	1,746	7,013	1,573	2,749	1,883	49,803	461.5	2,863

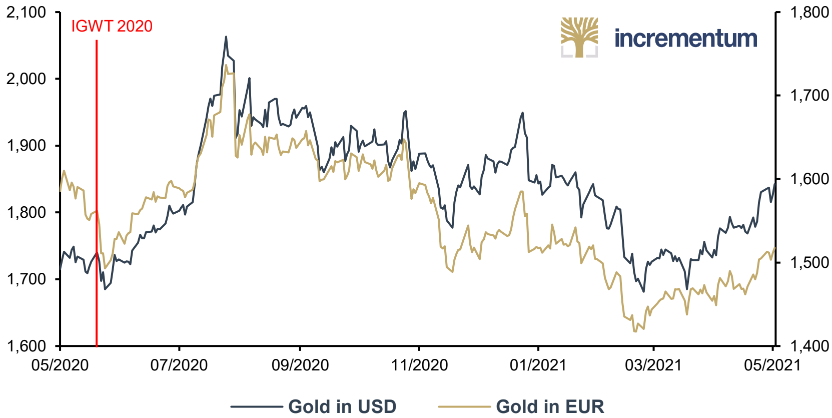
Source: World Gold Council, Incrementum AG

The best bulls in rodeo are unpredictable. Trying to outsmart them can lead cowboys to outsmart themselves.
Ty Murray

Following the (intraday) all-time high at USD 2,067 in August, 2020, gold entered into "correction mode". The gold price fell almost 20% to a low of 1,680 in March 2021. Mining stocks, as measured by the Gold BUGS Index (HUI), meanwhile declined by 32%, while silver showed amazing resilience. **With a gain of 24.6%, gold's performance in calendar year 2020 was stellar in US dollar terms, weaker in euro terms at 14.3%, but still well into double digits.**

Now let's take a look at the gold price development since the last *In Gold We Trust* report in US dollars and euros. Shortly after the publication of the last report on May 27, 2020, the impulsive bull run we had predicted began, surprising even hardened gold bulls with its vehemence.

Gold, in USD (lhs) and EUR (rhs), 1-Year Performance, 05/2020-05/2021

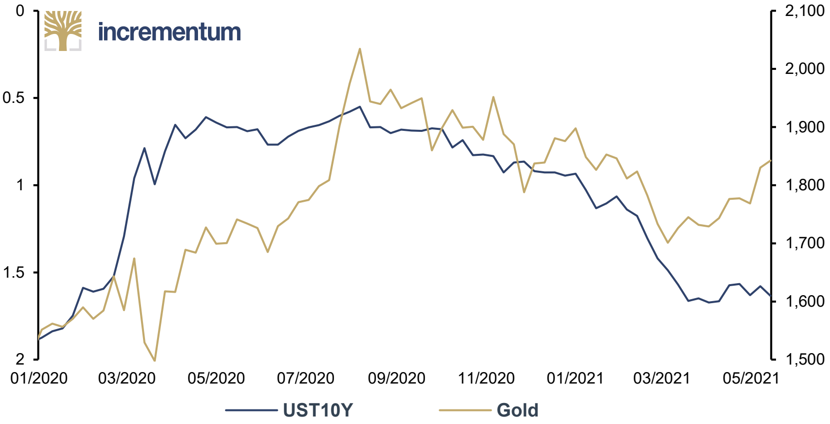


Source: Reuters Eikon, Incrementum AG

Selling gold because UST yields are rising sharply is 100% right in the short term but 100% wrong in the intermediate term.
Luke Gromen

A consolidation phase lasting several months then started in August. In addition to profit-taking, a firmer US dollar, and opportunity costs in the course of the BTC bull market, rising bond yields were the main trigger for the emerging headwind. In August 2020, the yield on 10-year US Treasuries traded at 0.5% and climbed to a high of 1.74% by March 2021. This yield level was already enough to provoke loud calls for the Federal Reserve to ride to the rescue and apply yield curve control.

UST10Y (lhs, inverted), in %, and Gold (rhs), in USD, 01/2020-05/2021



Source: Reuters Eikon, Incrementum AG

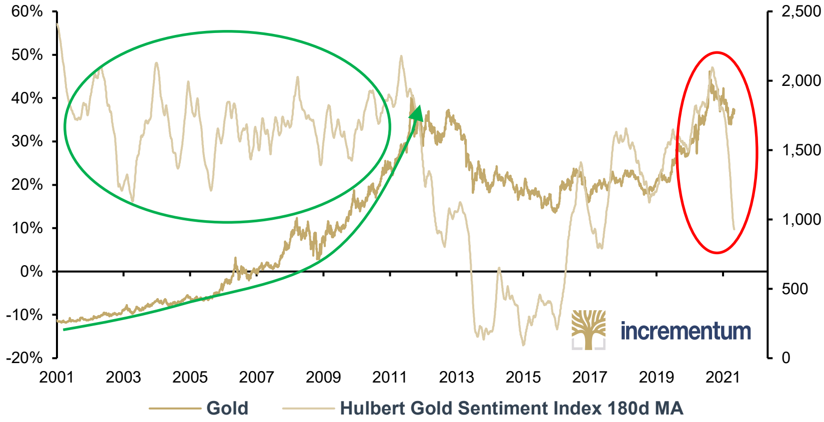
The 10% decline in gold prices in Q1/2021 marked the weakest quarterly performance since 2016 and the worst performance in a first quarter since 1982. Contributing to this price weakness, in addition to higher yields, were outflows from gold ETFs, which saw net tonnage decline for eight consecutive weeks through quarter-end. More exceptionally, through March 31, 2021, ETF holdings were down in 32 of 33 trading sessions, including a record streak of 24 consecutive daily declines through March 18, 2021, **demonstrating the exuberantly negative sentiment in the gold sector.**

Gold is behaving exactly like insurance should behave - rising and falling with confidence and catastrophic risk perceptions.
Simon Mikhailovich

Various sentiment indices also confirm this mood, which reminds us of home games of the Austrian Bundesliga soccer team Admira Wacker.[30] The Bernstein Daily Sentiment Index (DSI) had a bullish bias of only 12% in early March, a reading lower than 96% of all DSI readings since April 1987; and the Hulbert Gold Newsletter Sentiment Index (HGNSI) had a negative reading of 51.7% on March 8, 2021, lower than 99.8% of daily readings in the 21-year history of the HGNSI.[31] Since the launch of the HGNSI in April 2000, there have been only 9 daily readings that indicated a more pessimistic level than on March 8, 2021.[32]. **Until recently, the mood in the gold camp was anything but positive.**

—
[30] The Austrian soccer club Admira Wacker is known for its rather modest attendance, even by Austrian standards.
[31] Note: On the chart below, we use the 180-day moving average of the HGNSI, which smooths out the high volatility of the daily index numbers.
[32] *See* Reik, Trey: "Here we go again", *Quarterly Report*, Bristol Gold Group, Q1/2021

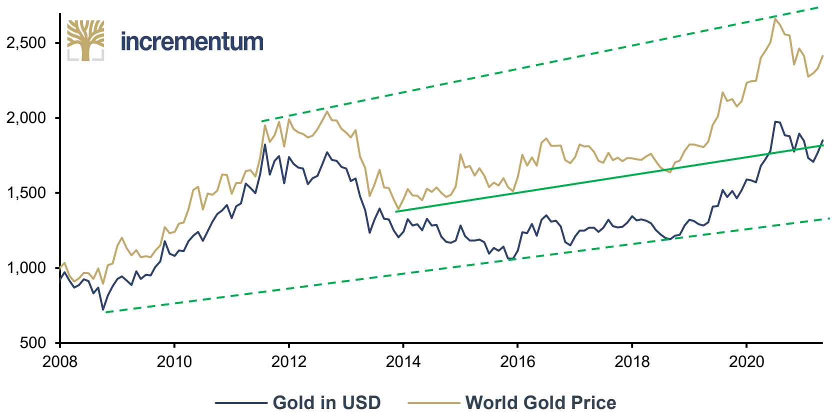
Hulbert Gold Sentiment Index (lhs), and Gold (rhs), in USD, 01/2001-05/2021



Source: Hulbert Ratings LLC, www.hulbertratings.com, Incrementum AG

Let us now turn back to the big picture. The world gold price, which represents the price of gold in the trade-weighted external value of the US dollar, reached an all-time high of USD 2,530 in August 2020 and has corrected since then. **However, the long-term upward trend of gold still appears to be intact.**

Gold Price, in USD, and World Gold Price, in USD, 01/2008-05/2021



Source: Reuters Eikon, Incrementum AG

Now let's broaden the currency spectrum and look at the development of the gold price in the major currencies since the turn of the millennium. The full year 2020 was clearly positive for gold in all currencies. The price increase was 19.5% on average. As before, the average performance in this secular bull market remains impressive. For example, the average annual performance from 2001 to 2021 is 9.5%. Gold was able to outperform virtually every other asset class and, above all, every other currency during this period – despite significant corrections in the meantime. Since the beginning of 2021, however, the performance has been slightly negative, with an average loss of 1.6%.

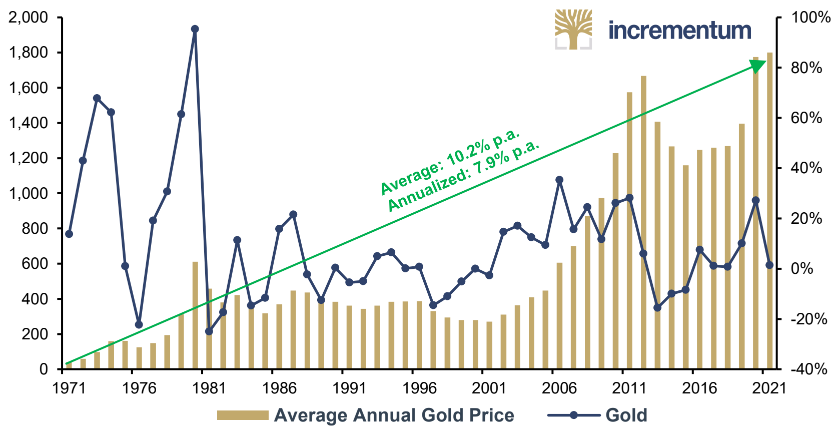
Gold performance since 2000 in various currencies (%)

	USD	EUR	GBP	AUD	CAD	CNY	JPY	CHF	INR	Average
2000	-5.3%	1.2%	2.4%	11.2%	-1.9%	-5.4%	5.8%	-4.2%	1.4%	**0.6%**
2001	2.4%	8.4%	5.3%	12.0%	8.8%	2.4%	18.0%	5.5%	5.8%	**7.6%**
2002	24.4%	5.5%	12.3%	13.2%	22.9%	24.4%	12.2%	3.5%	23.7%	**15.8%**
2003	19.6%	-0.2%	8.0%	-10.7%	-1.3%	19.6%	8.1%	7.4%	13.9%	**7.2%**
2004	5.6%	-2.0%	-1.7%	1.5%	-2.0%	5.6%	0.8%	-3.1%	0.1%	**0.5%**
2005	18.1%	35.2%	31.6%	25.9%	14.1%	15.1%	35.9%	36.3%	22.8%	**26.1%**
2006	23.0%	10.4%	8.1%	14.3%	23.3%	19.0%	24.2%	14.1%	20.7%	**17.5%**
2007	30.9%	18.4%	29.2%	18.0%	12.0%	22.5%	22.5%	21.8%	16.9%	**21.4%**
2008	5.4%	10.0%	43.0%	30.5%	28.7%	-1.5%	-14.2%	-0.8%	30.0%	**14.6%**
2009	24.8%	21.8%	13.0%	-1.6%	7.9%	24.8%	27.9%	21.1%	19.2%	**17.6%**
2010	29.5%	38.6%	34.2%	13.9%	22.8%	25.1%	13.2%	16.8%	24.8%	**24.3%**
2011	10.2%	13.8%	10.6%	9.9%	12.7%	5.2%	4.5%	10.7%	30.7%	**12.0%**
2012	7.1%	5.0%	2.4%	5.3%	4.2%	6.0%	20.7%	4.5%	11.1%	**7.4%**
2013	-28.0%	-30.9%	-29.4%	-16.1%	-23.0%	-30.1%	-12.6%	-29.8%	-19.1%	**-24.3%**
2014	-1.8%	11.6%	4.4%	7.2%	7.5%	0.7%	11.6%	9.4%	0.2%	**5.6%**
2015	-10.4%	-0.2%	-5.3%	0.6%	6.8%	-6.2%	-9.9%	-9.7%	-5.9%	**-4.4%**
2016	8.5%	12.1%	29.7%	9.4%	5.3%	16.1%	5.4%	10.3%	11.4%	**12.0%**
2017	13.1%	-0.9%	3.3%	4.6%	5.9%	6.0%	9.0%	8.3%	6.3%	**6.2%**
2018	-1.5%	3.0%	4.3%	9.0%	6.8%	4.1%	-4.2%	-0.8%	7.3%	**3.1%**
2019	18.3%	21.0%	13.8%	18.7%	12.6%	19.7%	17.2%	16.6%	21.3%	**17.7%**
2020	24.6%	14.3%	21.2%	14.1%	22.6%	17.2%	18.8%	14.3%	28.0%	**19.5%**
2021 YTD	-1.0%	-1.2%	-4.8%	-2.0%	-6.3%	-2.5%	4.2%	0.2%	-1.3%	**-1.6%**
Average	**9.9%**	**8.9%**	**10.8%**	**8.7%**	**8.8%**	**8.7%**	**9.9%**	**6.9%**	**12.4%**	**9.5%**

Source: Reuters Eikon, Incrementum AG, figures as of 05/20/2021

But let's go back even further in the history books. Since the "IPO of gold"[33] on August 15, 1971, the average annual growth rate of the gold price in US dollars is 10.16%, while the annualized growth rate (CAGR) is 7.91%. **In 2020, the average gold price reached a new all-time high of USD 1,774.** Since the beginning of 2021, the average gold price stands at USD 1,800 and thus at an absolute record level.

Annual Average Gold Price (lhs), in USD, and Gold (rhs), yoy%, 1971-05/2021



Source: Reuters Eikon, Incrementum AG

[33] *See* "The Role of Gold in Today's Global Multi-Asset Portfolio", State Street Global Advisors, January 2021

Conclusion

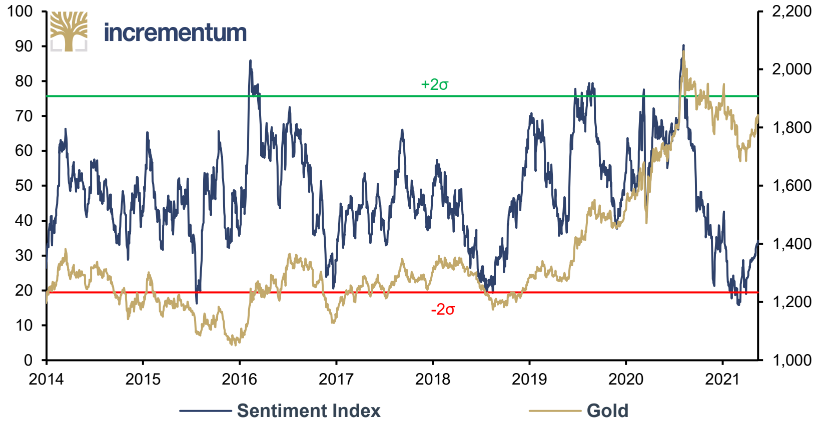
In the previous year, we drew the following interim conclusion:

> *"The strength of the trend was accentuated even further last year, which is why we assume that new all-time highs will soon be reached in US dollar terms. For us it is obvious that the gold price – against any currency – is about to enter a golden decade, i.e. the purchasing power of EUR, USD, etc. measured in gold will continue to fall."*[34]

Our forecast and our conclusion of the previous year, according to which gold is in a new bull market, has therefore come true. Based on the fundamental and technical situation, we currently see no reasons to question our confident stance.

A look at the Sprott Gold Bullion Sentiment Indicator[35] confirms this view. When mood reached an absolute low in March, the indicator was two standard deviations below its mean. Since then, the index and the gold price have recovered but are still far from the euphoria levels experienced in August of last year. In this respect, the foundation for further price increases seems excellent.

Sprott Gold Bullion Sentiment Index (lhs), and Gold (rhs), in USD, 01/2014-05/2021



Source: Sprott Asset Management LP, Incrementum AG

[34] "The Status Quo of Gold", *In Gold We Trust* report 2020, p. 24
[35] The data was kindly provided to us by our premium partner Sprott Asset Management.

Status Quo of the US Dollar

> *"To me, really the biggest question is, are we going to start this process [of the Federal Reserve effectively monetizing US stimulus] right away under the Biden Administration? Or are we going to run through this charade of 'We're going to try to defend the dollar system one last time and blow-up risk markets and then give the Federal Reserve the cover to come in and start this process after a whoosh down?'"*
>
> Luke Gromen[36]

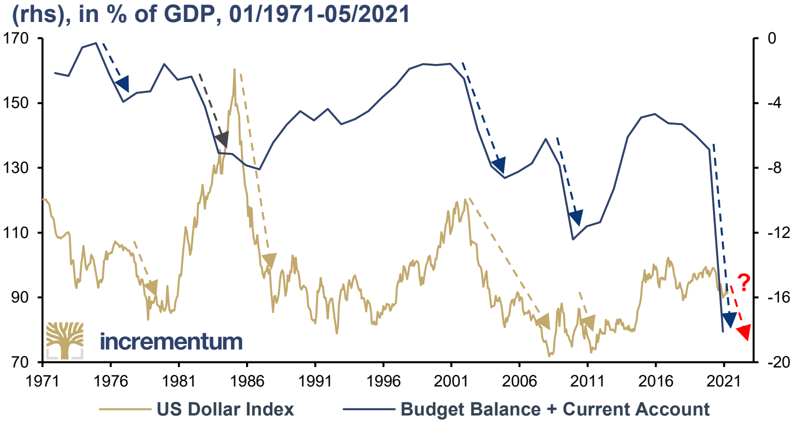
The role of the US dollar as the world's reserve currency ought to give the Federal Reserve a triple mandate: Dollar strength can cause havoc for a world swimming in a pool of dollar-denominated debt.
Yra Harris

"Shots in Arms and Money in Pockets" is the motto of newly elected US President Joe Biden.[37] It looks as if a biography of Franklin Delano Roosevelt and the MMT bible *The Deficit Myth* by Stephanie Kelton are lying on President Biden's bedside table.[38] Even though President Biden's (economic) policies are increasingly compared to those of the Roosevelt era,[39] we see a serious difference: The US was on a gold standard then, and it took the opening of a valve to get the US economy going again. Under FDR, the valve was a gold ban and a sharp devaluation of the US dollar against gold. **Now history could repeat itself, but in a slightly different form.**

...the only thing that can avoid a US balance of payments problem is a time machine.
Luke Gromen

Not least because the US trade deficit with the rest of the world is reaching new record levels.[40] In other words, the US consumer is now exporting more US dollars to the rest of the world than ever before.
The chart below shows that the twin deficit of the budget and current account balance has exploded in recent quarters. In our opinion, this is a valid reason for a coming vulnerability of the US dollar.

US Dollar Index (lhs), and Budget + Current Account Balance (rhs), in % of GDP, 01/1971-05/2021



Source: Reuters Eikon, World Bank, Incrementum AG

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[36] Gromen, Luke: "MacroVoices #254 Luke Gromen: The FED Faces No Easy Choices", YouTube, January 15, 2021
[37] *See* "Biden: 'Shots in Arms and Money in Pockets'", *The New York Times,* March 15, 2021
[38] On MMT *see* "The Status Quo of Gold", *In Gold We Trust* report 2020; "The Status Quo of Gold", *In Gold We Trust* report 2019
[39] *See* Alter, Jonathan:", *The New York Times,* April 12, 2021; Sargent, Greg, "Opinion: Can Biden Achieve an FDR-style Presidency? A historian sees surprising parallels.", *The Washington Post,* April 5, 2021; Lopez, German: "Joe Biden Wants You to Believe in American Democracy", VOX News, April 28, 2021How F.D.R.'s Heir Is Changing the Country", *The New York Times,* April 12, 2021; Sargent, Greg, "Opinion: Can Biden Achieve an FDR-style Presidency? A historian sees surprising parallels.", *The Washington Post,* April 5, 2021; 1
[40] *See* "How to diagnose your own Dutch disease", *Financial Times*, March 13, 2019

In a world where all paper currencies are toilet tissue, at least the dollar was double-ply.
Thomas Kaplan

However, let us now turn to the more recent past of the US dollar development. Starting in March 2020, the US dollar showed its muscles and benefited from its safe haven function in the context of the Covid crisis. Within a few trading days, the US Dollar Index (DXY) rallied from just under 95 to 103.6. However, a slide then then set in, and the DXY plummeted to a low of 89.4 on January 6, 2021. In 2020, the DXY trended 7.5% weaker.

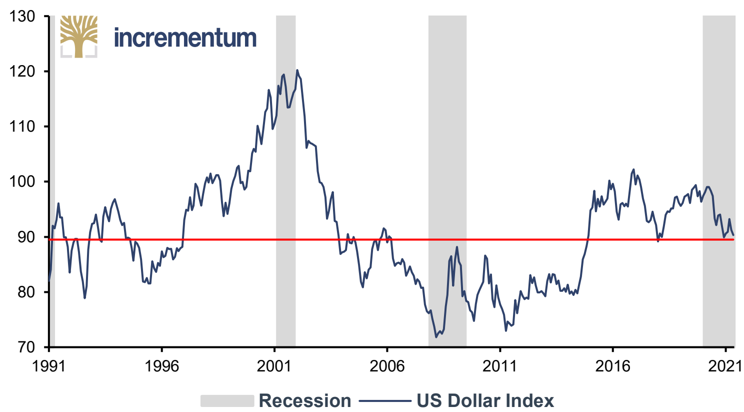
Courtesy of Hedgeye

Since the beginning of the year, the greenback has shown some strength, spurred in part by the fact that the vaccination campaign in the US has been significantly more successful than in the EU. Nevertheless, we assume that this is merely a short-term technical correction. The inherent weakness of the US dollar can be seen, among other things, from the fact that it has fallen against 15 of the 16 most important currencies in the last 12 months.

You're climbing ever higher up a cliff so that you can one day fall off at a higher level.
Andrew Hunt

The (psychologically) important support at 90 has held for the time being. This was also the low in 2018. This mark has not been broken for more than 15 years. Should this level be breached, the next support cluster would be at 80 and then at 73. **We would expect gold to gain momentum in the course of such a breakdown in the DXY.**

US Dollar Index, 01/1991-05/2021



Source: Reuters Eikon, Incrementum AG

The herd instinct among forecasters makes sheep look like independent thinkers.
Edgar Fiedler

If we look at the current consensus estimate for the US dollar, the fact that the analyst consensus expects the DXY to run sideways until 2024 is astonishing. Not a single analyst surveyed currently expects a significantly firmer US dollar; the highest forecast is 93.7. But the US dollar bears also seem to belong to the red list of endangered species: The most pessimistic US dollar estimate forecasts a decline to 86.8 points by 2024.

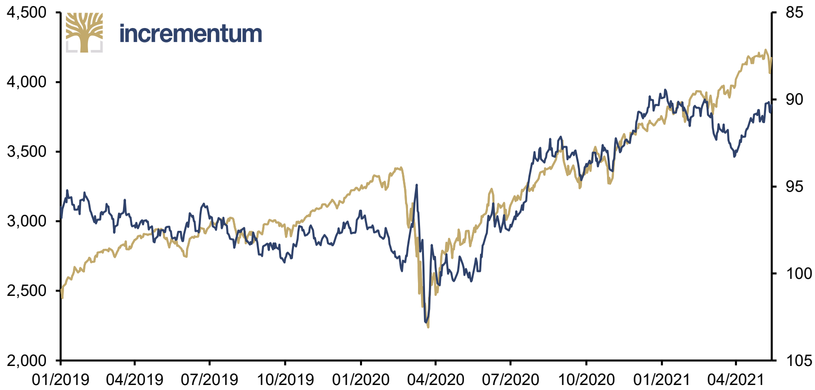
US Dollar Index Projection, 01/1971-12/2024E

Source: Reuters Eikon, Bloomberg, Incrementum AG

Political power can never override economic law.
Eugen von Böhm-Bawerk

But what if we don't see or don't want to see the "elephant in the room"? What if the bull market is a devaluation bull market and we are at the beginning of a crack-up boom? The next chapter will try to answer this question.

S&P 500 (lhs), and US Dollar Index (rhs, inverted), 01/2019-05/2021



Source: Reuters Eikon, Incrementum AG

Status Quo of Gold Relative to Stocks, Bonds and Commodities

> *"Seeing the intensity of the spike upward, fueled by the spike downward reminds me that we are riding something – across many markets – with a life of its own. It is not sound and it is not calm. It is hysterical. Hysterical always burns out sooner or later."*
>
> Notes From the Rabbit Hole

Not only the absolute development of the gold price, but also its relative development, – especially in relation to equities, bonds, and commodities – is valuable for a comprehensive analysis. Therefore, in the following pages we will examine the relative valuation and relative trend strength of gold compared to other asset classes to better understand the opportunity cost of investing in gold.

Gold Compared to Stocks

Source: New York Magazine, April 25, 2021

We live in times in which people like Dave Portnoy, Michael Saylor and especially Elon Musk enjoy rock-star or almost saintly status. Phenomena such as Dogecoin (a fun cryptocurrency based on a famous meme, which had a market capitalization of almost USD 100bn on May 8th), short squeezes on GameStop initiated by the Reddit community, the boom in SPACs, and the flood of IPOs that marked a new record of USD 180bn in volume, indicate that the markets are in hysterical overdrive. It's a mania fueled by ultra-loose monetary and fiscal policies. **Confidence among market participants seems as boundless as the sky-high level of liquidity.** Our friend Kevin Muir appropriately speaks of a "series of rolling bubbles". **The BIS has recently expressed concern, too:**

> *"Memories of the tech boom in the late 1990s resurfaced. Initial public offerings (IPOs) rose in number, and the rapid growth of conduits set up to scout for private firms and list them continued. In addition, retail investors took on record amounts of leverage, used options to speculate on individual stocks, and coordinated on social media platforms to put pressure on short-sellers."*[41]

I got a tip to buy some stocks, lost my shirt, lost my socks. The minute that I buy some stocks, they faw down an' go boom.
Eddie Cantor, February 1929

Exorbitant price gains on the first trading day after an IPO are a reliable measure of an excessively party-hearty atmosphere on the stock markets. The average price gain on the first day of post-IPO trading last year was 88.4%. According to Jay Ritter, a finance professor at the University of Florida, the 1999 and 2000 IPO vintages averaged first-day trading returns of "only" 70.0% and 56.1%, respectively. In addition, earnings quality seems unusually low: In 2020, 80% of IPOs had negative earnings, exactly the same as in 2000.[42]

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[41] "Markets wrestle with reflation prospects", *BIS Quarterly Review*, March 1, 2021
[42] *See* Duffy, Kevin: "Neomania Revisited: From Bitcoin to Beeple", *The Coffee Can Portfolio*, Vol. 2 (2), April 26, 2021

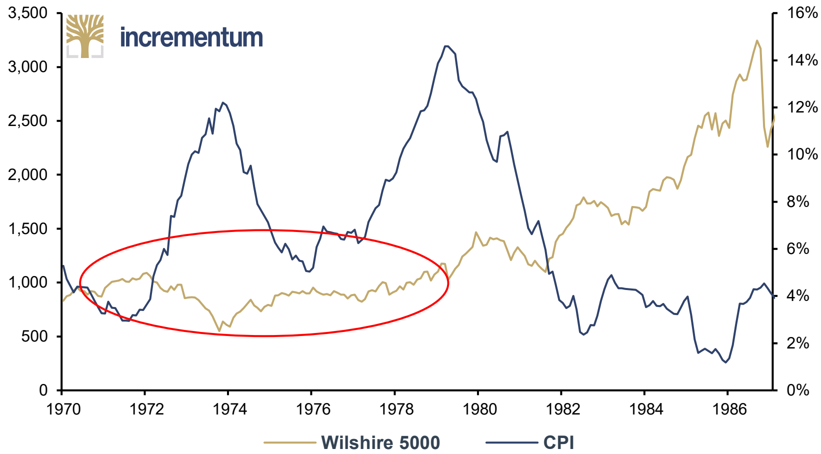
Yes, I think it must end badly, but I don't know when.
Charlie Munger, February 2021

Fundamentals and market data are already gradually clouding over, and the air is becoming increasingly thin. But the momentum of the market, especially the tech sector, seems unstoppable, driven by passive index investors and increasingly retail audiences. David Jones, market strategist at Bank of America, recently noted in an interview on Bloomberg TV that over the past 5 months, inflows into the equity market have been higher (USD 576bn) than in the past 12 years combined (USD 452bn).[43] **He refers to the current environment as "*peak positioning, peak profits and peak policy.*"**[44]

...inflation is a far more devastating tax than anything that has been enacted by our legislature. The inflation tax has a fantastic ability to simply consume capital.
Warren Buffett

Moreover, it seems that the market assessment is clearly focused on *re*flation, while the consequences of rising *in*flation are still somewhat ignored by the majority of equity investors. It is well known that moderate inflation boosts the performance of stocks. The "feel-good" corridor of inflation rates for the stock market is between 0.5% and 2.5%. The question we should be asking is: **How high can inflation rates go before they have a negative impact on stocks?**

Wilshire 5000 (lhs), and CPI (rhs), yoy%,01/1971-12/1987



Source: Federal Reserve St. Louis, Incrementum AG

During the stagflation of the 1970s, gains from stocks were split 30:70 between price gains and dividends. Warren Buffett wrote a highly recommended article about this in 1977. He noted that as inflation rates rose, dividends fell in step with economic performance. In this sense, stocks act as a kind of "equity bond" whose "yield" is burned by demonetization.[45] **An inflation rate beyond 3 to 4% combined with stagnant economic performance is almost a guarantee for a weak performance of "equity bonds".**[46]

Every great inflation is made by a central bank that dismisses it as due to transient factors.
Larry Summers

The decisive factor for a company's success in an inflationary environment is whether it has pricing power. What does this mean? The ability to make price adjustments depends heavily on whether a company is able to push through higher prices on the market or else there is strong margin pressure

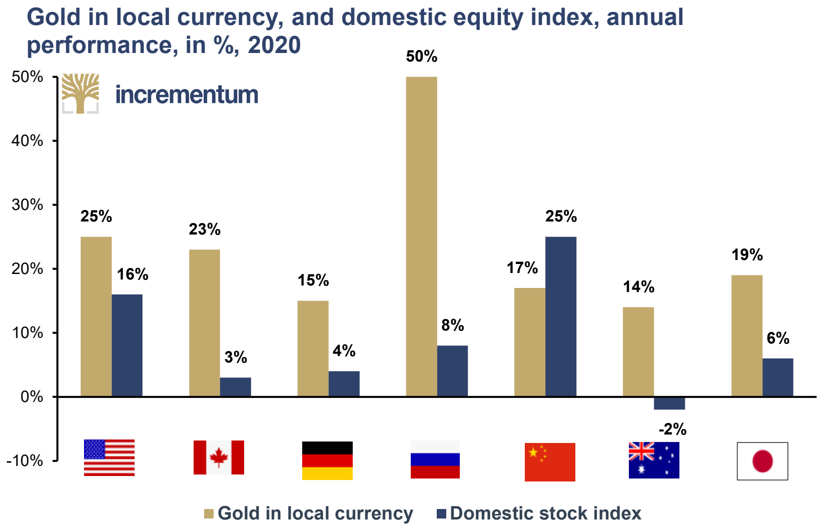
[43] *See* "David Jones - As Boom as it Gets", YouTube, April 14, 2021
[44] *See* Muir, Kevin: "Low-Volume Levitations", The Macro Tourist, April 14, 2021
[45] *See* Buffett, Warren: "How Inflation Swindles the Equity Investor", *Fortune*, May 1977
[46] *See* Inflation's Magic Number is Four, *Wall Street Journal*, May 18, 2021

due to strong competition. **Positioning along this axis can be done using the following key figures:**[47]

- Average profit margin (high is good)
- Share of labor costs in total costs (low is good)
- Herfindahl index (a measure of market concentration)
- Raw material producer (positive) vs. raw material buyer (negative)
- Nominal debt will be inflated away by higher inflation; therefore companies with a high proportion of fixed-rate debt in their equity could benefit.
- Strongly cyclical stocks will lose out compared to defensive stocks.

Gold is the Robert Pecl of the portfolio.[48]
Ronald Stoeferle

Gold may soon have to prove again one of its key properties, namely as a defensive and stabilizing portfolio component. As is well known, confidence is built by repeatedly meeting expectations. During the Covid crash last year, gold impressively confirmed this role as a portfolio stabilizer. **In all major markets – except China – gold outperformed the respective domestic stock market.**



Source: Reuters Eikon (as of December 30, 2020), Incrementum AG

History shows that equities are at their most vulnerable when being outperformed by the yellow metal.
Martin Pring

If we compare the performance of various asset classes during the weakest 20% of trading days in the S&P 500 for the period 01/2000 to 12/2020, the "catenaccio qualities"[49] of gold become apparent, too.

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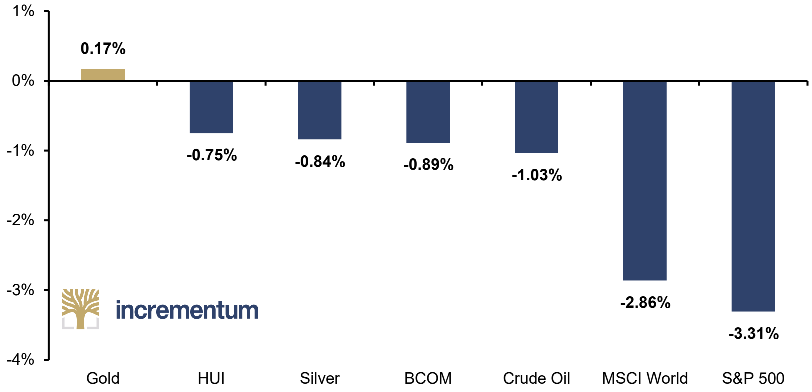
[47] For more information on the characteristics of equities under different inflation scenarios, *see* Man Institute: Inflation Regime Roadmap, June 2020
[48] Note: Robert Pecl was an Austrian footballer who played exclusively for SK Rapid Wien. His playing style is aptly characterized on Wikipedia as follows: "The defender held the nicknames 'Ironfoot' and 'Red Robert' due to his relentless style of play towards himself and opponents." Wikipedia: Robert Pecl, our translation
[49] *See* Wikipedia: Catenaccio

Performance during the 20% weakest S&P 500 weeks, 01/2000-12/2020

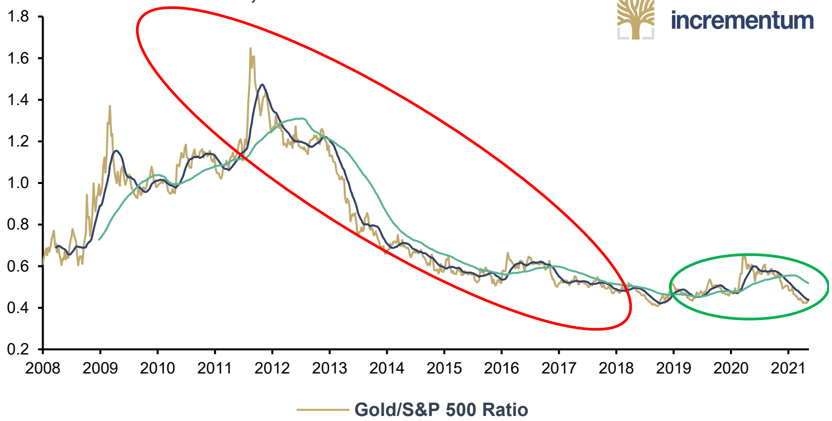


Source: Reuters Eikon, Incrementum AG

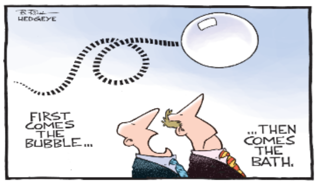
Gold should be the bedrock of all portfolios.
Brent Johnson

Loyal readers know: We view stock market performance as a key opportunity cost of gold. The following chart plots the gold/S&P 500 ratio since 2008. The trend of one ounce of gold buying fewer and fewer shares of the S&P 500 was broken in 2019, and the purchasing power of gold as measured by the S&P 500 trended upward. However, this changed in the middle of last year and the ratio again trended in favor of stocks.

Gold/S&P 500 Ratio, 01/2008-05/2021



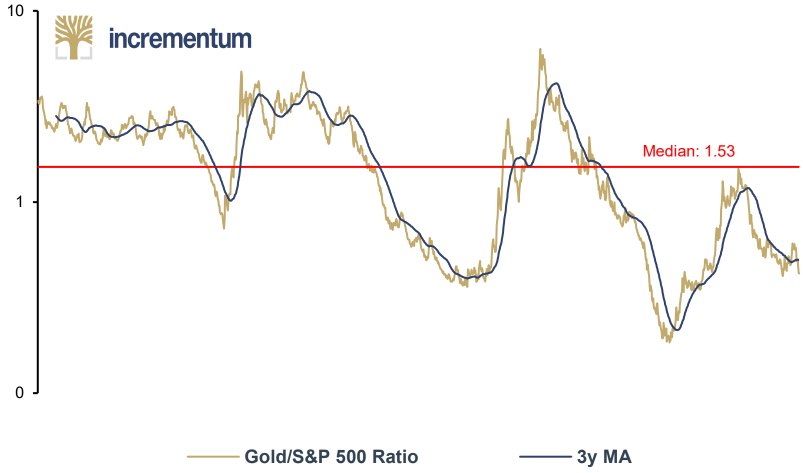
Source: Reuters Eikon, Incrementum AG



Courtesy of Hedgeye

Let's now look at the relationship over the longer term – since 1900, to be more precise. Gold looks attractive relative to US stocks and may have made a secular turnaround. The ratio of gold to the S&P 500 is trending to a median of 1.53. It appears that the downtrend seems to have broken. The moving average has stabilized and is now pointing back up. Based on the previous counter-trend rallies, gold could more than triple the S&P 500 if it were to reach its 120-year median value over the next ten years.

Gold/S&P 500 Ratio (log), 01/1900-05/2021

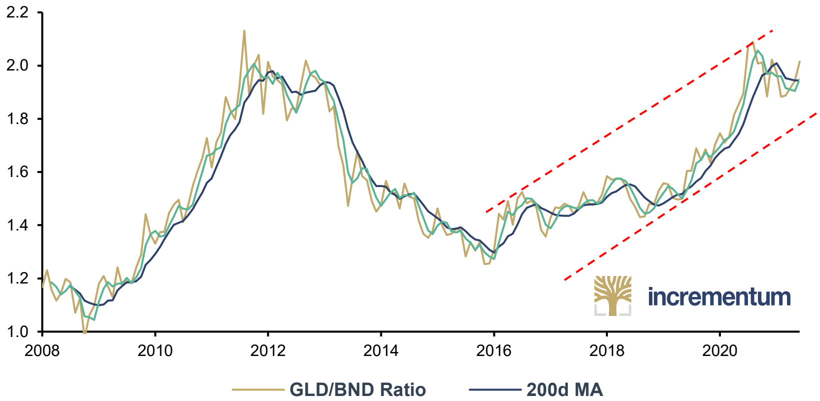


Source: Nick Laird, Reuters Eikon, Incrementum AG

Gold Compared to Bonds

It seems that gold could start a phase of relative strength against stocks. But gold also shows clear trend strength against bonds and has done so since 2016.

Gold/Bonds Ratio (GLD/BND), 01/2008-05/2021



Source: Reuters Eikon, Incrementum AG

There is a need for an investment alternative to nominal government bonds. With yields near zero, nominal bonds are limited in their ability to provide either return or diversification.
Ray Dalio

Let us now take a closer look at the development of gold relative to Treasuries. In the context of the Covid crisis, the biggest economic shock since World War 2, both asset classes were among the few reliable havens. Both gold and US bonds reached their interim highs for the year on March 9, then sold off briefly in the general panic and rallied soon after. On August 4, 10-year US Treasuries bottomed at a yield of 0.52%, followed just four days later by gold hitting a new all-time high. **Both have thus fulfilled their antifragile role in exemplary fashion – at least on the surface.**[50]

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50 *See* Gave, Louis-Vincent: "The 10 Important Changes Of The Past Year", Gavekal Research, December 18, 2020

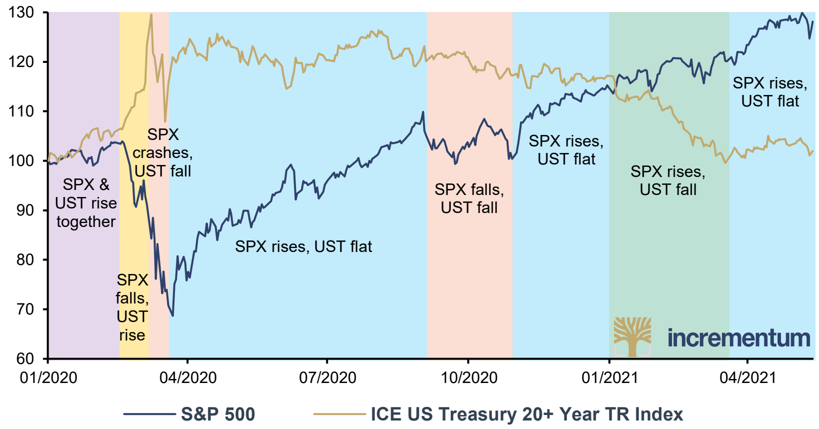
Gold (lhs), in USD, and UST10Y (inverted, rhs), in %, 01/2008-05/2021

Source: Federal Reserve St.. Louis, Reuters Eikon, Incrementum AG

In inflationary periods such as the US in the 1970s, the 60/40 portfolio suffered greatly. Nominal returns optically looked good, but real returns were abysmal. Commodities and cash easily outperformed equities and bonds, representing a failure of standard portfolio diversification over this period.
Variant Perception

But if we look a little deeper below the surface, we see that Treasuries suddenly became strongly positively correlated to stocks in the darkest days of March 2020.[51] This represents a significant difference from past cycles, when bonds compensated for losses on the equity side and smoothed out volatility. However, over the long term, this negative correlation is the exception rather than the rule. According to the wonderful team at Gavekal, the correlation between stocks and bonds in the US has been positive in 70 of the last 100 years.[52] As soon as inflation expectations rise on a sustained basis, the correlation will rise and become positive again. **If this occurs, the 60/40 portfolio will be deprived of its foundation – namely, a negative correlation between stocks and bonds. Will US Treasuries now have to hand over the scepter to gold?**

S&P 500, and ICE US Treasury 20+ Year TR Index, 100 = 01/2020, 01/2020-05/2021



Source: Reuters Eikon, Gavekal Research/Macrobond, Incrementum AG

Increasingly, one gets the impression that almost all markets would no longer be functioning without sizeable support from the Federal Reserve. Randal Quarles, the Vice Chairman for Financial Supervision at the Federal Reserve, recently confirmed our assumption:

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51 *See* "Desperately Seeking Anti-Fragility: Part I", GaveKal Research, August 28, 2020
52 *See* "Portfolio for the high seas", Variant Perception, July 2020

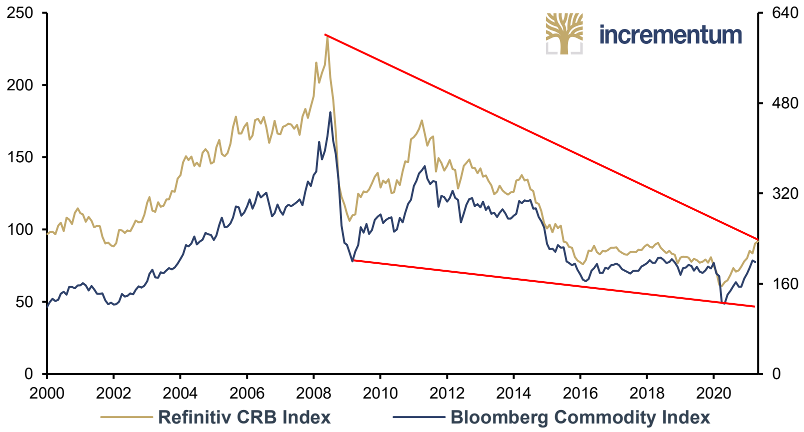
One day, central banks will decide that they need to support their currencies instead of supporting their bond markets. In this scenario, bond markets will implode.
Gavekal

"It may be that there is a simple macro fact that the Treasury market being so much larger than it was even a few years ago (...) that the sheer volume there may have outpaced the ability of the private market infrastructure to support stress of any sort there (...) ***There is thus an open question about whether there will be an indefinite need for the Federal Reserve to participate as a purchaser to support market functioning****."*[53]

Gold and Commodities

Last year, we joked in this space: "*For the commodity sector, the last few months have been as turbulent and unsuccessful as Michael Bloomberg's election campaign.*" Now it seems that the commodity sector has risen like a phoenix from the ashes. The CRB Commodity Index (CRB) and the Bloomberg Commodities Index (BCOM) showed a V-shaped development last year. After plunging nearly 50% through early May 2020, the commodity indices then set out on a tear. Since the beginning of the year, the CRB is up 20%, the BCOM 16%. **However, to reach their 2008 highs, both indices would still have to more than double.**

Refinitiv CRB Index (lhs), and Bloomberg Commodity Index (rhs), 01/2000-04/2021



Source: Reuters Eikon, Incrementum AG

Those who know it best, love it least, because they have been hurt the worst.
Don Coxe

As predicted last year, the tide now seems to have turned in favor of commodities. The question arises: Are we now on the threshold of a new commodity supercycle? A number of factors suggest that we are:

- Commodities have been in a bear market for ten years, resulting in a significant lack of investment activity and declining production volumes.
- The increasing focus on fiscal stimulus (infrastructure projects, etc.) will stimulate the commodity sector much more than was the case in the pure QE paradigm.
- The pent-up demand from months of shutdowns should further fuel commodity demand once economies fully rebound.
- Institutional investors are still heavily underweighted or not allocated to commodities at all. We firmly believe that commodities – and real assets in general – will resume their historical role as a safe haven.

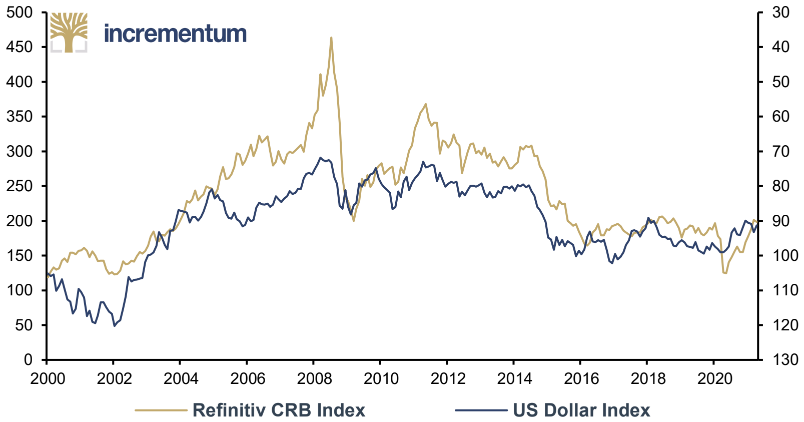
[53] Derby, Michael S.: "Fed Official Wonders Whether Treasury Market Can Handle Massive Issuance Alone", *The Wall Street Journal*, October 14, 2020

- Growing inflation concerns will continue to provide a tailwind for commodities.
- Rising geopolitical tensions will encourage and challenge resource nationalism and geopolitical risk premia.
- In our opinion, the US dollar is in a secular bear market.

Fortunes are made by buying low and selling too soon.
Nathan Rothschild

The last point is confirmed by the following chart. The comparison of the development of commodities with the US Dollar Index (DXY) shows that commodity prices and the US dollar continue to be strongly correlated (-0.86). To put it pithily: The well-being of commodities thus hangs by the US dollar's thread. **Commodity prices will only experience strong support if the US dollar continues to tend towards weakness.**

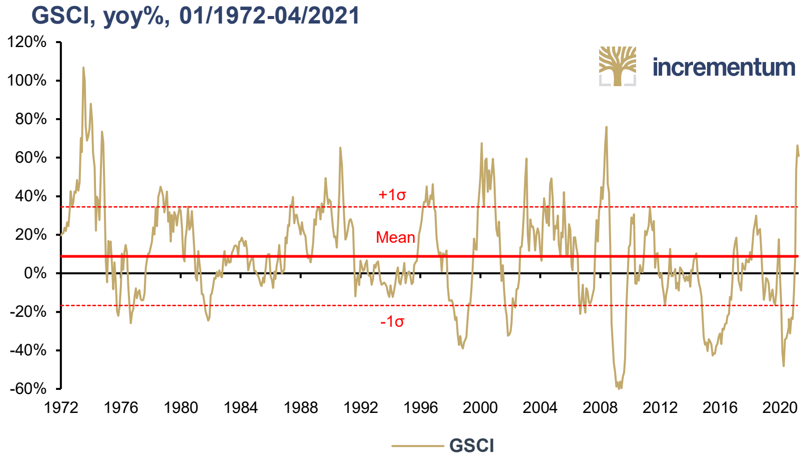
US Dollar Index (lhs), and Refinitiv CRB Index (rhs, inverted), 01/2000-04/2021



Source: Reuters Eikon, Incrementum AG

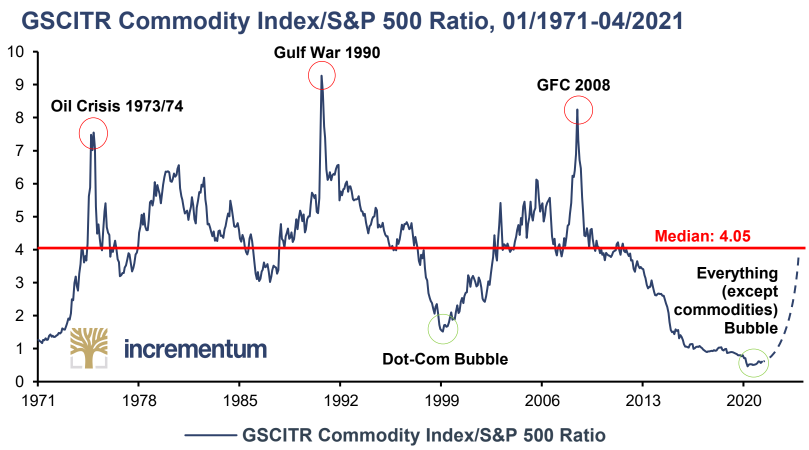
Chinese equities and the CRB index have a traditional 70% positive correlation – but where has it gone?
Dave Rosenberg

But isn't the commodity boom already overdone in the short term? We should also look at China, which is now responsible for almost half of commodity consumption. The weak stock market development as well as sluggish credit growth and Beijing's increasing deleveraging efforts should by no means be disregarded, despite all the euphoria for the commodity supercycle. Futures market positioning as well as various sentiment indices and anecdotal evidence point to near-term overheating. A look at the yoy change also confirms this hypothesis. **In this respect, a "breather" in the commodity segment would not be surprising, in our opinion.**



Source: Reuters Eikon, Incrementum AG

Now let us look at the performance of commodities relative to the stock market. Loyal readers know that the following chart has been by far the most cited chart of the *In Gold We Trust* reports in recent years.[54] It shows impressively that the relative valuation of commodities compared to stocks remains historically extremely cheap. Compared to the S&P 500, the GSCI Commodity Index (TR) is at its lowest level in 50 years. The ratio is currently 0.48, significantly less than the long-term median of 4.05, miles away from the highs.



Source: Lynkeus Capital LLC, Dr. Torsten Dennin, Reuters Eikon, Incrementum AG

But even in absolute terms, it seems that everything is set for a new secular bull market in commodities. According to a long-term study by Ned Davis Research, the average price increase in commodity bull markets is 217%. In this respect, we would be just at the beginning of the development, since the Bloomberg Commodity Index is currently only 50% above its low of April 2020, when it marked an 18-year low.

[54] We would like to take this opportunity to once again thank Prof. Dr. Torsten Dennin, who came up with the idea for this terrific chart.

Commodity Bull Supercycles

	Growth	Duration (years)
1802-1814	68.5%	12
1843-1864	200%	21. 4
1896-1920	267.6%	23.9
1933-1951	329.9%	18
1972-1980	168.4%	7,9
1999-2011	270%	12.1
Average bull market	**217.4%**	**15.9**

Source: Ned Davis Research Group, Incrementum AG

Conclusion

Party On, Wayne! Party On, Garth!
Wayne's World

The grueling bear market in commodities may have come to an end last year. Not only are we facing a renaissance in the sector, but we are also already in the midst of one. In addition to macro factors, it appears that a green tipping point has been reached. Global decarbonization efforts are gaining momentum, most notably in Europe and China, with the US recently following suit.[55]

It is the nature of every bull market to take along the fewest possible number of investors for the entire ride.
Richard Russell

In our opinion, decarbonization and ESG investing will become structural drivers in the supply and demand of many commodities. We see positive impacts especially for copper, nickel, battery metals, but also silver. The – heavily subsidized – demand from electric vehicles, the accelerated – and also heavily subsidized – development of renewable energies in power generation, especially wind turbines and photovoltaics, and the – so far carelessly neglected – development of smart grids will change the (marginal) demand curves for many commodities. In our opinion, the *green wave* is not the central reason for our positive outlook for the raw materials sector. **Undoubtedly, this trend is an *additional* factor that is now swinging the pendulum in favor of commodities (and inflation).**

[55] *See* "Navigating the recovery & the green/black divide", Deutsche Bank Commodity Outlook, April 2021

Status Quo of Debt Dynamics

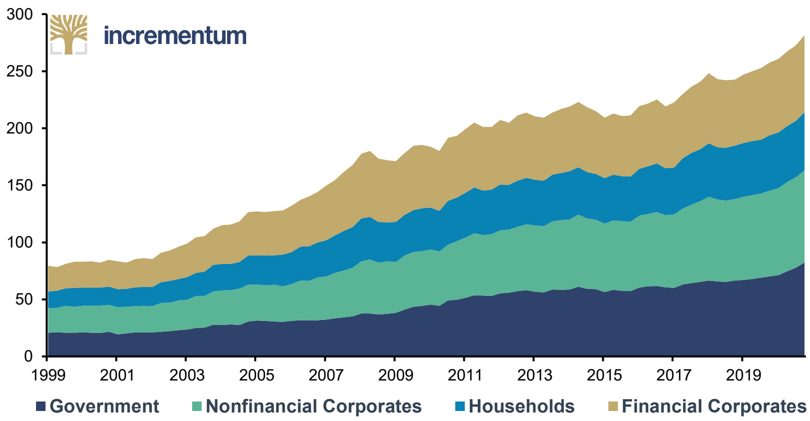
> *"We are experiencing the end game of the great debt super cycle. As the private sector has become increasingly overlevered, the baton is being passed to the public sector, where resources are so strained that the printing press has become the last resort."*
>
> Scott Minerd

The level of outstanding debt in the US today at all levels of society, government, households, businesses, is just about 80 trillion. If the general level of interest rates goes up by 100 basis points and stays there, you've just pushed 800 billion or 4% of GDP into debt servicing. The US economy can't really afford to have bond yields back up more than they already have.
Dave Rosenberg

The fact that a drop can cause a barrel to overflow cannot be blamed on the drop, even if it falls completely unexpectedly from the sky, as it were, in the form of a worldwide pandemic. The barrel can only overflow if it is already too full. And the drop of debt that fell from the sky in 2020 is indeed large. After all, in 2020 we witnessed the biggest debt increase the world has ever seen in peacetime.

The Covid-19 pandemic added about USD 24trn to the global debt mountain last year. It has now reached a record level of USD 281trn, and the global debt-to-GDP ratio now exceeds 355%.[56] Contributing to the sharp relative increase in global debt of 13.3%, or 32 percentage points, has been the severe economic downturn – global GDP is expected to have contracted by more than 4% in 2020.[57]

Global Debt by Sector, in USD trn, Q1/1999-Q4/2020



Source: IIF, BIS, IMF, World Bank, Incrementum AG

Public debt has risen particularly sharply, by 18.0%, due to the countless support measures and tax shortfalls, which is why we now want to focus on this development. In many countries, public debt is now around or even above the level at the end of World War 2. The US has now not only reached this level but also rapidly passed it due to the continuation of the US's spending spree by the new president, Joe Biden. Unsurprisingly, per capita debt growth was strongest in the US last year. **Per capita debt exploded by almost 25%.**

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56 *See* Jones, Marc: "COVID response drives $24 trillion surge in global debt: IIF", Reuters, February 17, 2021
57 Statista.com: Growth of the global gross domestic product (GDP) from 2015 to 2025

	Public debt in USD trn, 2020	Debt growth in USD trn, 2020	Public debt per capita in USD, 2020	Debt growth per capita in USD, 2020
USA	22.21	4.20	67,672	12,797
Canada	0.76	0.31	20,300	8,202
GB	2.68	0.46	40,176	6,961
Japan	9.01	0.72	71,192	5,690
Germany	2.12	0.44	25,571	5,286
France	2.92	0.34	43,552	5,063
Italy	2.85	0.24	47,157	4,048
China	9.65	1.66	6,931	1,191

Source: Gavekal, Incrementum AG

What´s important – and it´s probably the most important thing that has ever happened in my investing career – is that the narrative surrounding deficit spending has changed.
Kevin Muir

And there is currently no end in sight to the rapid expansion of public debt. For one thing, the sluggish Covid-19 vaccination process, especially in Europe, has delayed exit from the lockdowns and the associated economic damage. Many governments have already announced that they intend to dig deep into their pockets once again to revive the hard-hit economy. The US is pushing ahead with the USD 1.9trn American Rescue Plan Act. And that is by no means all. At the end of April, President Biden proposed a multi-trillion-dollar infrastructure program as well as a comprehensive family support program. According to estimates by the Congressional Budget Office (CBO), the budget deficit in the USA in the first six months of fiscal year 2021 was USD 1.7trn higher than in the same period of the previous year. **Tax revenues now cover only 50% of spending.[58] If these fundamentals were applied to a business, many politicians would likely be found guilty of delaying insolvency.**

A small debt produces a debtor; a large one, an enemy.
Publilius Syrus

The rhetoric remains martial. Last year, the former president of the ECB, Mario Draghi, who has since become Italy's prime minister, wrote in an op-ed in the FT: "*We face a war against Covid-19 virus*[59]." It is increasingly being pointed out that in some countries, such as the US, public debt has reached dimensions that are really only known in times of war. Thus, the EUR 750bn EU fund *NextGenEU* is commonly referred to as a *reconstruction fund*, as if factories and infrastructure had been destroyed by bombs in the Covid-19 pandemic.

To stay with our image: In 2021, another big drop will fall into the brimming barrel, followed by numerous other smaller drops in 2022 and 2023. The fact that the barrel will soon overflow seems to be only a question of time – and it should not take long. After all, debt has risen significantly not only in the general government sector but also in the corporate and household sectors, by 12.0% and 8.3% respectively.

Interest Service Threatens to Explode – Despite Low Interest Rates

Deflation and secular stagnation are the risks of our time.
Lawrence Summers

The continuing very low level of interest rates is increasingly being invoked to justify a hefty, Keynesian-inspired increase in spending. Given the low interest rates, the additional debt could be financed (almost) free of charge and, in the case of negative interest rates, the government would even be paid to go into debt. What is not raised, however, is the question of how, then, the

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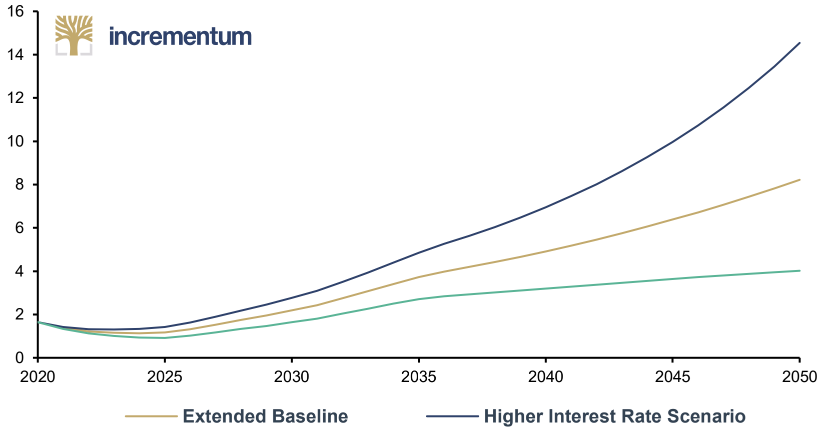
[58] *See* "Monthly Budget Review: March 2021", Congressional Budget Office, April 8, 2021
[59] Draghi, Mario: "Draghi: we face a war against Covid-19virus and must mobilise accordingly", *Financial Times*, March 25, 2021

interest on the increased debt burden can be serviced in the case of rising interest rates, not to mention how the debt can one day be repaid.

If real interest rates, implausibly, were still 0.5 percent as the debt-to-GDP ratio rose to 400 percent, that would indicate that the extremely low interest rates were such a powerful force that that degree of debt would be warranted.
Lawrence Summers

Larry Summers (again) goes one step further. The former chief economist of the World Bank and US Treasury Secretary has put forward the proposal to replace the public debt level as a benchmark for fiscal policy with the debt service ratio. According to this proposal, fiscal policy should be guided only by ensuring that debt service does not exceed 2% of GDP. If the real interest rate were to remain below 1.33%, a government debt of 150% of GDP would meet Summers' criterion; and at a real interest rate of 0.5%, even a debt of 400% of GDP would be feasible.[60] Given that real interest rates are currently negative, the intent of the proposal is easy to see through. **The national debt is to be expanded substantially.** However, the fact that interest service will soon become a problem for the US is shown by the following calculations of the Congressional Budget Office.

Net Outlays of Interest, in % of GDP, 2020-2050E



Source: CBO, Incrementum AG

By 2024, interest service will still ease slightly from the current 1.4% of GDP to 1.1%, despite huge budget deficits in 2020 and 2021. Starting in 2024, however, interest expense as a share of GDP increases, reaching 8.6% in 2051 in CBO's baseline scenario calculations. This would mean that just under one-third of tax revenues would have to be spent solely on interest service.

Economic stimulus is like draining the deep end of the pool, pouring it back into the shallow end, and expecting the water level to rise.
Robert Higgs

It is also assumed that the interest rate on 10-year US Treasuries increases to 3.3% in 2030 and to 4.9% in 2050. This would be a comparatively moderate increase. In 2001, the 10-year US Treasury bond yielded 5.0%, and in 1991 it was as high as 7.9%. Assuming a higher interest rate level with an average interest rate on government debt of 2.7% in 2030 and 6.6% in 2050, instead of 2.2% and 4.6% respectively in the baseline scenario, we would end up with an interest service of 15.8% of GDP. At the same time, the national debt-to-GDP ratio would increase to 260% by 2051; and these calculations do not include the budgeted spending of the second major Covid-19 relief program, the American Rescue Plan Act, which amounts to USD 1.9trn, or nearly 10% of GDP.[61]

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[60] *See* Furman, Jason and Summers, Lawrence: "A Reconsideration of Fiscal Policy in the Era of Low Interest Rates", November 30, 2020
[61] *See* "The 2021 Long-Term Budget Outlook", Congressional Budget Office, March 4, 2021

The simple reality is, it will depend what Central Banks decide; do they do yield curve control and crush their currencies or not. (…) I believe they will do yield curve control, and I believe they will crush their currencies.
Louis-Vincent Gave

It is inconceivable that the interest service on the US national debt would increase tenfold compared to today. The consequence would be a massive cutback in all other expenditures, freely following the maxim that once the (debt) barrel has overflowed, further (debt) drops will not make any difference. It is therefore more likely that there will be a fundamental change in the monetary climate, characterized, for example, by a cap on interest rates. **The recent 70th anniversary of the historic *Treasury-Fed Accord* may be inspiration for those who want to turn back the clock before this landmark agreement.**

The Treasury-Fed Accord of March 3, 1951

2021 is not only the 50th anniversary of the "temporary" suspension of the gold redemption obligation for US dollars. 70 years ago, on March 3, 1951, the US Treasury and the Federal Reserve agreed that the Federal Reserve would no longer be subordinated to US military objectives.

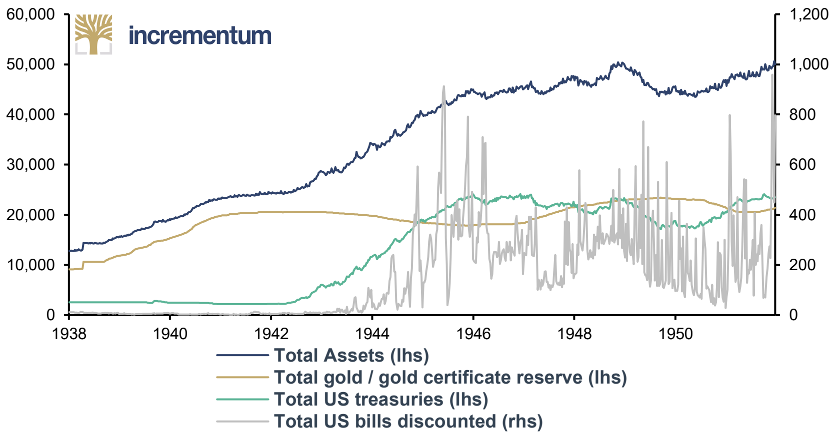
History repeats itself, but in such cunning disguise that we never detect the resemblance until the damage is done.
Sydney J. Harris

In the World War 2 years, the Federal Reserve acted as an – indirect – financier of the US government. To finance the war more cheaply, the Federal Reserve kept the bond yield on US Treasuries constantly low. In April 1942, the Federal Reserve had complied with a request to this effect from the Treasury Department. The yield on short-term government bonds was capped at 0.375%, while the yield on long-term government bonds was implicitly capped at 2.5%.[62] In view of the substantial financing needs, this led to a significant increase in the Federal Reserve's balance sheet total as well as in the money supply. **To put it another way: By capping bond yields, the Federal Reserve gave up control over its balance sheet and the money supply.**

War does not determine who is right, only who is left.
Bertrand Russell

The Federal Reserve's balance sheet grew rapidly after the US's entry into the war on December 11, 1941, but especially after the aforementioned capping of bond yields in April 1942, and it nearly doubled by the end of World War 2. Most of the balance sheet expansion was caused by the direct purchase of government bonds of various maturities and the discounting of US bills.

Federal Reserve, Selected Balance Sheet Items, in USD mn, 01/1938-12/1951

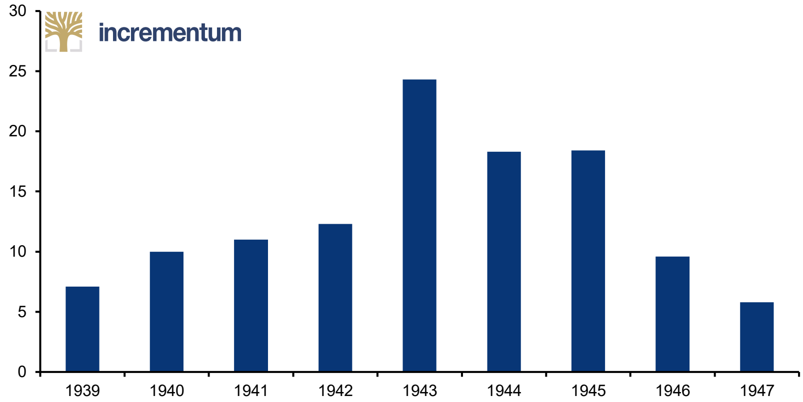


Source: NBER Macrohistory Database, Incrementum AG

[62] Today, one would probably speak of *yield curve control* and *financial repression. See* chapter "Yield Curve Control, the Biggest Mistake of the ECB So Far! – Exclusive Interview with Russell Napier" in this *In Gold We Trust* report, as well as "Financial Repression – Economic Reasons Come to the Fore", *In Gold We Trust* report 2020; "Financial Repression – Slowly But Surely, the Screws Are Tightened Further", *In Gold We Trust* report 2018

Broad money growth was substantial during the war years and remained above 5% in the post-war years – with the exception of the years 1948 to 1950.

US Money Supply Growth, in %, 1939-1947

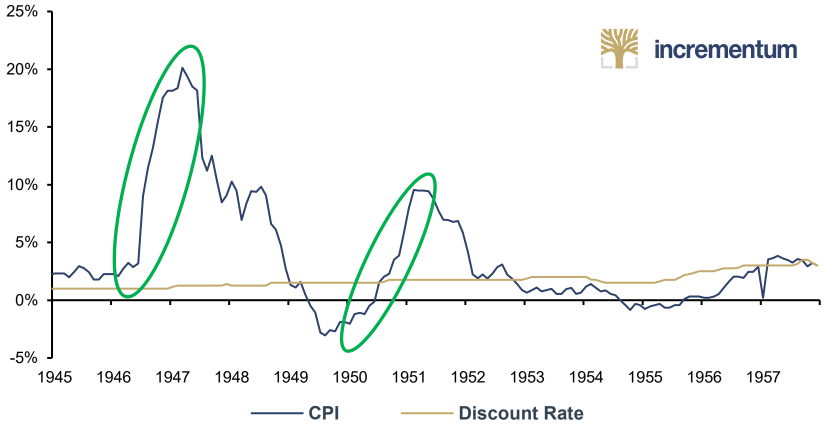


Source: Macrohistory, Incrementum AG

A generation which ignores history has no past and no future.
Robert Heinlein

The massive expansion of the money supply was bound to have an impact on the inflation rate sooner or later. Inflation did not really break out until after the end of the war. And, as so often in history, inflation shot up within a few months. In the third month of this hyperinflationary cycle, the inflation rate reached double digits. In March 1947, i.e. within less than a year, it surged to 20.1%. As can be seen from the next chart, however, the Federal Reserve countered the surge in inflation only with a homeopathic increase in interest rates from 1.0% to 1.25%, because the continued existence of a cap on yields meant that the Federal Reserve could only respond with a rather symbolic interest rate hike.

CPI and Discount Rate, 01/1945-12/1957



Source: Macrohistory, Incrementum AG

One practical consequence of this arrangement, which today would probably be called *yield curve control*, was a sharp decline in government debt. In 1945, it was still 110.7% of GDP, but in 1951 it was only 62.5%.[63]

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[63] See chapter "The Long-term Debt Cycle" in this *In Gold We Trust* report.

The general idea that government debt can be financed by central banks is a dangerous proposition. In the past, this has resulted in hyperinflation and economic turmoil. That's why central banks are independent.
ECB

World War 2 had ended, but this was not the beginning of a time of peace. Conflict between the US and the Soviet Union, which had been allies in World War 2, became increasingly apparent. In July 1950, the Korean War broke out, and with it the first in a long series of proxy wars between the superpowers. Funding needs rose again, and the Federal Reserve began to worry seriously about US creditworthiness**. The Federal Reserve Chairman at the time, Thomas B. McCabe, therefore made it his mission to free the Federal Reserve from the Treasury Department's grip.**

A committee was formed to resolve the conflict. In the course of its deliberations, McCabe, in a conversation with President Harry S. Truman on January 31, 1951, referred to support for the Treasury bond market as "extra-curricular activity".[64] McCabe emphasized that the Federal Reserve would always consider the impact of its decisions on the broader economy. More narrowly defined, its primary objective was to ensure stable economic development, which it sought to accomplish by regulating the money supply, as well as the cost and availability of money.

Those who do not know what happened before they were born will remain a child forever.
Cicero

This was nothing other than the Federal Reserve's attempt to regain control over its balance sheet total and the money supply, i.e., to put an end to the yield cap. A few weeks later, on March 3, 1951, the US Treasury and the Federal Reserve reached an agreement. The joint statement issued the next day by the Treasury Department and the Federal Reserve stated succinctly:

> *"The Treasury and the Federal Reserve System have reached full accord with respect to debt management and monetary policies to be pursued in furthering their common purpose to assure the successful financing of the Government's requirements and, at the same time, to minimize monetization of the public debt."*[65]

With this, McCabe had achieved his goal. The Federal Reserve had gained its independence through the 1951 Treasury-Federal Reserve Accord. Only a short time later, on March 31, 1951, McCabe ended his work at the Federal Reserve and returned to the private sector.[66]

130% – a Limit Value with Far-Reaching Consequences – Is Rapidly Approaching

But back to the present. A study by Hirschmann Capital shows how dramatic the national debt situation already is in some countries.[67] This study reveals that since 1800, 51 of the 52 states with a debt level of more than 130% of GDP have not been able to meet their payment obligations in full.

Debt eats equity.
Ray Dalio

In the end, there were only four solutions. Either there was a haircut, a debt restructuring, a devaluation of the currency, or the debt burden was inflated away. And in most instances there was only a short time between the 130% mark being exceeded and the default. The only exception to this rule is present-day Japan.

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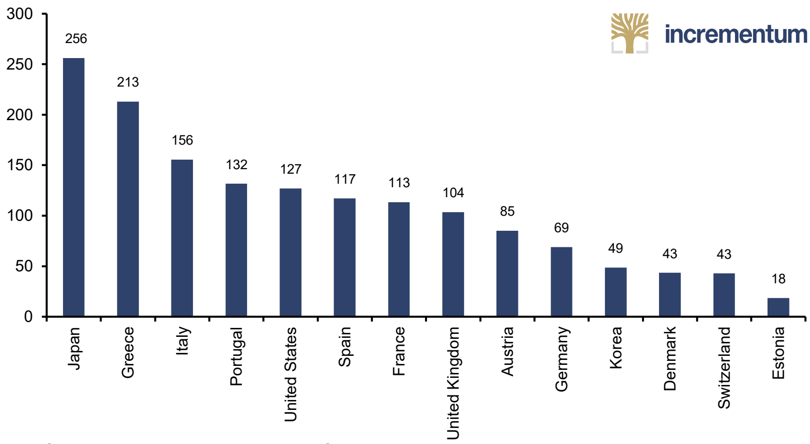
64 "Minutes, Federal Open Market Committee, Jan. 31, 1951, 10 a.m.", Federal Reserve Bank of Richmond, p. 25
65 "Joint Announcement by the Secretary of the Treasury and the Chairman of the Board of Governors, and of the Federal Open Market Committee, of the Federal Reserve System", Federal Reserve Bank of Richmond, March 4, 1951
66 Historical documents can be found here: Federal Reserve Bank of Richmond
67 *See* "At what point is there a point of no return for government debt?", themarketear.com, August 25, 2020

Country	Year 130% threshold crossed	Default Year	Default Type	Default Cause
Argentina	1827	1827	Outright default	Independence
Spain	1869	1877	Restructuring	Revolution
Turkey	1872	1876	Outright default	Drought and flood
GB	1919	1931	Devaluation	World War 1
France	1920	1920	High inflation	World War 1
Germany	1918	1922	Hyperinflation	World War 1
Japan	1943	1943	Various	World War 2
Australia	1945	1946	High inflation	World War 2
Canada	1946	1946	High inflation	World War 2
Ghana	1960	1966	Restructuring	Lower exports
Costa Rica	1981	1981	Outright default	Lower exports
Greece	2010	2010	Bailout	Financial crisis 2008

Source: Reinhart & Rogoff, Rieti Japan, Bloomberg, Hirschmann Capital, Incrementum AG

In the present era, some industrialized countries, notably the US, have already exceeded this 130% mark or are approaching it in leaps and bounds. Greece, which had to make a debt cut in 2012, now has a public debt of over 200%; while Italy, the world's eighth-largest economy, is already well above the 130% mark with a public debt of 156%.

General Government Gross Debt, in % of GDP, 2020



Source: Reuters Eikon, Incrementum AG

It's all too much.
George Harrison

In view of this debt explosion in some industrialized countries, the question arises whether Victor Gaspar of the IMF, in his foreword to "*Fiscal Monitor: Policies for the Recovery*" (October 2020), had only the overindebted emerging markets in mind, when he formulated the following sentence: "*For countries with unsustainable debt, options for orderly debt restructuring must be considered.*"[68]

The Backlogged Insolvencies Will Further Increase the National Debt

Facts do not cease to exist because they are ignored.
Aldous Huxley

The support measures for companies adopted in the wake of the Covid-19 pandemic consist of repayable loans and the possibility of deferring tax payments and payments to social security systems. In addition, the obligation to file for insolvency has been suspended in some countries. **As a result, in contrast to ordinary recessions and in particular the recession following the Great**

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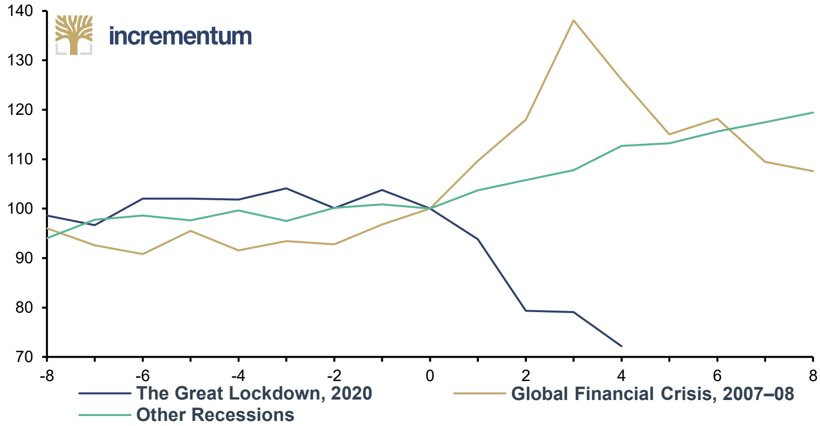
[68] "Fiscal Monitor: Policies For the Recovery", International Monetary Fund, October 2020, p. IX

Financial Crisis of 2007/2008, insolvencies have not only not *risen* in the current crisis, they have actually *fallen*.

Bankruptcies, last prerecession quarter = 100, 1990-2020



Source: IMF, Incrementum AG

Reality denied comes back to haunt.
Philip K. Dick

The current backlog of insolvencies is enormous. Compared with the Great Financial Crisis, it is almost 54 percentage points, although the economy has slumped by a similar amount. But even compared with ordinary recessions, the backlog is 40.5 percentage points greater.

An economic crisis is the sudden exposure of clustered misconceptions of the future.
Rahim Taghizadegan

As soon as the insolvency wave starts to roll, the fundamental inflationary attitude of all political players will once again become apparent. This is because a deflationary playing out of the insolvency wave will not be permitted under any circumstances.[69] States will further widen their budget deficits through revenue reductions, bad-debt losses, and rising social spending. The bad debts will hit creditors, including commercial banks, hard.

The Tip of the Iceberg Is Just the Tip of the Iceberg

And when I look at the current picture of expected tax revenues combined with benefits promised to future generations, this is the most unsustainable situation I have seen ever in my career.
Stanley Druckenmiller

However, the publicly discussed debt figures by no means tell the whole story. This is because they only include the so-called explicit debt. These figures do not consider the implicit debt, which consists of the net claims of contributors to social security systems, and in particular to pension insurance, as well as the net claims of current and future generations on the state on the basis of the current legal situation. These can be, for example, entitlements to the health care system. In other words, they are future payment obligations of the state, either from the budget or from social security funds. Receipts in the form of taxes and levies, now and in the future, may cover, exceed or fall short of these disbursement obligations. If they fall short, the country reports an explicit debt. **The balance of implicit and explicit debt, if positive, i.e. if the government is overindebted, is called the sustainability gap. To close this gap, either current or future taxes and levies must be increased or current or future expenditures must be reduced.**

[69] *See* "The Status Quo of Gold", *In Gold We Trust* report 2020

Money creation in the zero interest rate trap, however, becomes a currency race. The greatest success of the euro is the lack of alternatives: Among the blind, the one-eyed man is king. After the dollar and before the yen, it is second in class. Europe also has a valuable asset: the world's most governable and reliable taxpayers, especially the Germans.
Rahim Taghizadegan

Germany is a striking example of how the sole focus on explicit debt obscures the view of what is important. In 2019, i.e. before the Covid-19 virus began to afflict the world, Germany had managed to push explicit government debt below even the Maastricht criterion of 60% of GDP, at 59.8%. In absolute terms, German debt fell below the 2trn mark. But these figures are only the tip of the iceberg. And as with any iceberg, the bulk of Germany's sustainability gap debt lies below the water's surface and thus out of the public eye. Although Germany's explicit debt was below 60% of GDP before the outbreak of the pandemic, its implicit debt was 176%, resulting in a sustainability gap of 236%, or EUR 8.1trn. **Three-quarters of Germany's debt is below sea level, and only one-quarter is above.** To reduce this debt, either revenues would have to be increased by 10.4% or expenditures reduced by 8.7%.[70]

By this analysis, Germany has gone from being a model student to a laggard. For in the EU ranking, Germany's public debt was above average in 2018, the last year for which there is an EU-wide calculation. With a sustainability surplus of 136% of GDP, Croatia took the top spot, followed – hard to believe – by Greece, with a surplus of 105% of GDP. With a sustainability gap of 95% of GDP, France is also well ahead of Germany, as is much-maligned Italy, whose 2018 sustainability gap was 122%, compared to Germany's 170%.

The black zero is not an achievement, a stupidity and a lie. Not an achievement, because it is thanks to the ECB's cheap money. It is a stupidity because it means that even more German savings are flowing abroad and are being lost abroad. And a lie, because with proper accounting it would be clear that the true debt of the state has risen massively due to uncovered promises, besides others maternity pension, retirement at 63, basic pension.
Daniel Stelter

The Covid-19 pandemic has naturally exacerbated the situation dramatically. In the meantime, calculations by the Stiftung Marktwirtschaft show a sustainability gap for Germany of at least 357%, or EUR 12.3trn. To reduce this debt completely, revenue increases of 16.3% or spending cuts of 13.0% would be required. Another scenario, which assumed a 2nd lockdown in the fall (a lockdown that was actually imposed, on November 2, 2020) arrived at a sustainability gap of 401.2%, or EUR 13.8trn. While the implicit debt of German social security funds remained almost unchanged at just over 200% of GDP, the implicit debt of public budgets increased strongly, from 79.0% to 92.9% of GDP (without a second lockdown) and 136.2% of GDP (with the second lockdown).[71] However, the sustainability gap has widened not only due to the massive increase in budget deficits, but also because of the significant economic slump in 2020. As the government shutdowns in spring 2021 dragged on much longer and were far more pronounced than anticipated, it can be assumed that the above calculations will be exceeded by the time normality actually returns.

If these guys owned a funeral parlor, no one would die.
Gordon Gekko

For the US, investor Jeffrey Gundlach estimates that the implicit debt of federal, state and local governments piles up to USD 163trn, or 775% of GDP, five times the explicit debt of the US.[72] That repayment of this amount is illusory is obvious.

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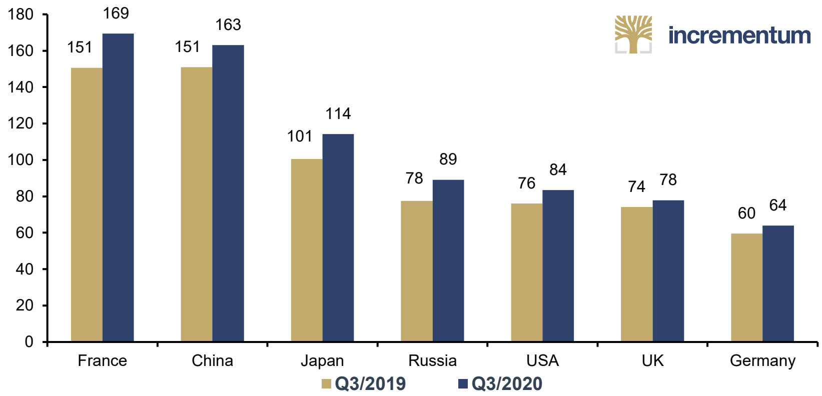
[70] *See* "Was kann sich der ehrbare Staat noch leisten? Covid-19, Schulden – und noch eine Pflegereform?" ("What can the respectable state still afford? Covid-19, debts – and another care reform?"), Stiftung Marktwirtschaft, January 2021, p. 5
[71] *See* "Was kann sich der ehrbare Staat noch leisten? Covid-19, Schulden – und noch eine Pflegereform?" ("What can the respectable state still afford? Covid-19, debts – and another care reform?"), Stiftung Marktwirtschaft, January 2021, p. 9
[72] *See* "Gundlach Warns America's 'Unfunded Liabilities' Are $163 Trillion, More Than 5x National Debt", ZeroHedge, May 6, 2021

Corporate Indebtedness

The looming increase in corporate bankruptcies will generate credit losses that will need to be absorbed, either by the financial system or by taxpayers.
BIS

In ordinary times, corporate borrowing is a positive signal. In anticipation of a good economy, companies take out loans to finance new projects and expand existing production capacities. The debts are repaid by the expected higher revenues. The current situation is completely different. The significant increase in corporate debt from Q3/2019 to Q3/2020 of 12.1% in the industrialized countries is largely due to the support measures taken by governments, which have extended a not inconsiderable part of these measures in the form of loans.

Corporate Debt by Country, in % of GDP, Q3/2019-Q3/2020



Source: BIS, Incrementum AG

Creditors have better memories than debtors.
Benjamin Franklin

As described above, this increase in corporate debt has not yet been reflected in higher insolvency figures, at least in Europe. In the USA, the situation looks different. There, insolvencies rose sharply in 2020,[73] while in Europe the end of the suspension of the obligation to file for insolvency is being pushed back time and time again. The BIS estimates that corporate loan write-offs in the G7 countries, as well as in China and Australia, could total around 2% of GDP in the period 2020–2022, or around USD 1trn. **This would be about three times the write-offs required in ordinary years.[74]**

Household Debt

If you think nobody cares if you're alive, try missing a couple of car payments.
Earl Wilson

From Q3/2019 to Q3/2020, global household debt increased 8.3%, a much lower rate than the average increase of 18.0% in government debt and 12.0% in corporate debt. In the case of households, however, most of the increase in the debt is not attributable to higher nominal debt – despite strong fluctuations, this has only slowly increased on average over many years – but to the sharp economic downturn.

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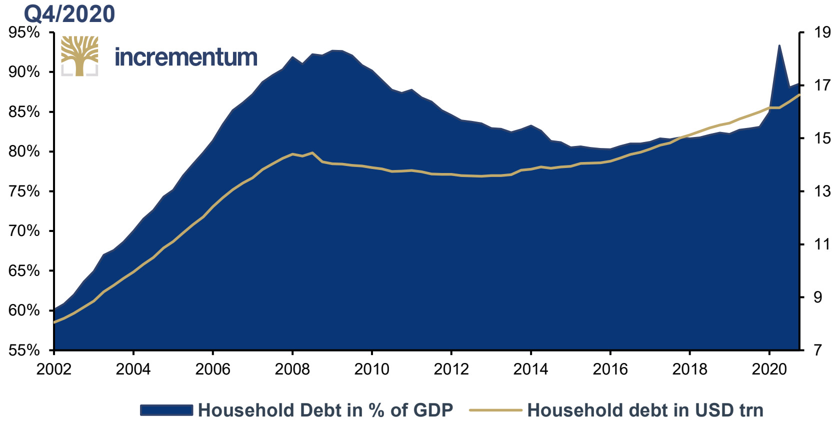
[73] *See* Irum, Tayyeba and Hudgins, Chris: "US corporate bankruptcies end 2020 at 10-year high amid COVID-19 pandemic", S&P Global, January 5, 2021
[74] *See* Mojon, Benoît, Rees, Daniel and Schmieder, Christian: "How much stress could Covid put on corporate credit? Evidence using sectoral data", *BIS Quarterly Review*, March 1, 2021

Household Debt, in % of GDP (lhs), and in USD trn (rhs), Q1/2002-Q4/2020



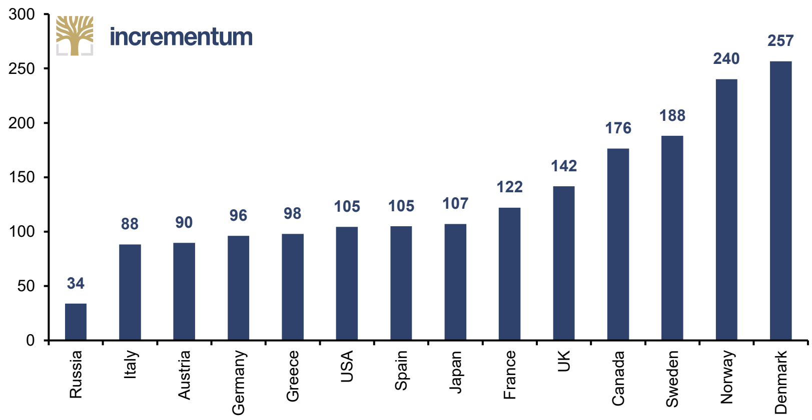
Source: Reuters Eikon, Incrementum AG

Money doesn't make you happy. I now have 50 million but I was just as happy when I had 48 million.
Arnold Schwarzenegger

The two Covid-19 support packages, the Cares Act (March 2020) and the American Rescue Plan (March 2021), worth almost USD 2trn each, have had a dampening effect on the development of household debt in the US. As several studies by the Federal Reserve Bank of New York show, about one-third of the support payments received were spent on repaying existing debt. The actual goal of the assistance payments, to boost consumption by compensating for lost income, was clearly missed. Only 29.2% and 24.7% of the funds, respectively, flowed into consumption. The propensity to consume thus declined significantly within a year. In contrast, the share of savings increased from 36.4% to 41.6%.[75] **Those who can afford it seem to be putting money aside for the impending tax increases or benefit cuts.**

Not surprisingly, household debt is particularly high in those countries with low government debt. An increase in the real interest rate level would cause considerable problems in the Scandinavian countries, but also Switzerland and Australia, for example.

Debt of Households, in % of Available Net Income, 2020 or latest available



Source: OECD, Incrementum AG

[75] *See* Armantier, Olivier et al.: "How Have Households Used Their Stimulus Payments and How Would They Spend the Next?", *Liberty Street Economics*, Federal Reserve Bank of New York, October 13, 2020; Armantier, Olivier et al.: "An Update on How Households Are Using Stimulus Checks", *Liberty Street Economics,* Federal Reserve Bank of New York, April 7, 2020

Conclusion

The first lesson of economics is scarcity. There is never enough of anything to satisfy all those who want it. The first lesson of politics is to disregard the first lesson of economics.
Thomas Sowell

The financial consequences of the Covid-19 pandemic are far from over. Even though economic activity will largely return to normal in the coming months – particularly in the services sector, which has been hit harder than average – it will still take some time for the economy as a whole to return to its pre-Covid-19 level. Although the catch-up effects will boost economic growth in the short term, entrepreneurs, in Europe in particular, and private households will also experience catch-up effects. The massive backlog of insolvencies will spread across the economy in a wave of insolvencies and put a strain on creditors. This could also cause difficulties for at least some banks, despite high provisions. European states will also be hit hard by the insolvencies. Social security funds, for example, will have to write off claims. At the same time, countries have assumed liabilities that will become effective in the event of insolvency. This will put a heavy strain on budgets, at least in the current and coming year.

I'll tell you the truth, and it's up to you to live with it.
William Goldman

At the same time, governments want to make enormous sums available for the so-called green restructuring of the economy, which will also put a strain on state budgets in the coming years. An easing on the debt front is therefore not to be expected. On the contrary, the continuing low level of interest rates is also likely to tempt politicians to postpone budget consolidation as long as they possibly can. After all, the green restructuring of the economy is seen as a matter of planetary survival. Therefore, pressure for a more lenient approach to excessive deficits is likely to increase. Last fall, for example, some economists presented the proposal that investments classified as green should not be subject to the deficit and debt rules of the EU's Stability and Growth Pact.[76]

I used to do a little but the little wouldn't do it so the little got more and more.
"Mr. Brownstone"
Guns N' Roses

However, there are considerable doubts that such a softening of the euro zone's fiscal rules can sustainably boost economic growth. Debt-financed fiscal policy can provide a short-term boost to the economy that lasts for one to two quarters. This was the case with the debt-financed stimulus packages of 2009, 2018, and 2019. However, even though the amount of money raised and spent was substantial, the benefits of these measures proved to be very fleeting, and the harmful effects of higher debt remain. Econometric studies show that in all major economies, government debt as a percentage of GDP is well above the level at which these harmful effects begin to occur. The several trillion US dollars borrowed for pandemic relief in the second quarter will therefore tend to slow growth in the future.

Courtesy of Hedgeye

Current research shows that the government spending multiplier is negative after about three years, compared with estimates from forty-year-old textbooks that assumed a positive spending multiplier with a range of four to five years.[77] Among politicians, however, the option of growing out of debt is popular precisely because it justifies short-term government spending while at the same time not requiring concrete counter-financing models such as tax increases or spending cuts. The debt not only finances itself – almost as if by magic – but also triggers growth, which at least reduces the relative debt ratio measured as a percentage of GDP.

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[76] *See* Pekanov, Atanas and Schratzenstaller, Margit: "Optionen für eine grüne Reform der europäischen Fiskalregeln" ("Options for a Green Reform of European Fiscal Rules"), *Die Presse,* October 28, 2020
[77] *See* "Quarterly Review and Outlook", Hoisington Investment Management Company, Q3/2020

The same fact can be expressed in another way. The marginal utility of debt decreases significantly:

Decade	New public debt in USD bn	GDP growth in USD bn	Additional units of public debt to increase GDP by 1 unit
1950 - 1959	33	243	0.14
1960 - 1969	89	496	0.18
1970 - 1979	478	1,610	0.30
1980 - 1989	2,108	3,014	0.70
1990 - 1999	2,823	3,989	0.71
2000 - 2009	6,535	4,818	1.36
2010 - 2019	10,890	6,979	1.56
2020 - 2021e	5,799	488	11.89

Source: Reuters Eikon, BEA, Incrementum AG

Whatever is original in Keynes is not true and whatever is true is not original.
Henry Hazlitt

From this perspective, the next step in the EU debt union – the inclusion of joint debt instruments issued by the EU – is questionable. In April, the German Federal Constitutional Court rejected an appeal through summary proceedings against joint debt issuance. However, according to some observers, the outcome of the main proceedings cannot be predicted. It could take several years before a ruling is issued.[78] **By then, however, joint EU debt will be a reality.** Equally symptomatic of the monetary climate change that is taking place is the fact that EU Budget Commissioner Johannes Hahn, of all people (who, as a member of the Austrian People's Party (ÖVP), belongs to the conservative EPP), questioned the Maastricht criteria at the beginning of May. One would expect such an advance from politicians entrusted with social and environmental agendas and those from the left-wing political spectrum, but not from the minister of finance and also not from the conservative camp.[79]

How Will It All End?

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

As already stated, we consider the option of growing out of debt to be very unlikely, especially for Europe. Demographic change will further limit the ability to repay. For the much younger and more dynamic US, the starting position seems better. While digitization will be able to increase productivity, it will definitely not be enough to significantly depress debt levels. **Again, the US is more likely to succeed in tapping this source of growth than Europe.**

Naïve at best is the call made in February of this year by French economist Thomas Piketty. In an open letter, he launched the demand that the ECB simply cancel the government bonds it holds.[80] This measure is intended to give euro member states more financial room for maneuver to finance reconstruction after the Covid-19 pandemic as well as to effect the green transformation of the economy. At first glance, this may sound plausible. But apart from significant legal concerns about whether such an approach would be contrary to EU law,[81] it would remove any incentive for states to exercise fiscal discipline in the future. The Pandora's box of repeating this procedure would be opened and could presumably only be closed again by a particularly frugal budget policy over

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[78] *See* Müller, Reinhard: "Warnschuss aus Karlsruhe" ("Warning shot from Karlsruhe"), *Frankfurter Allgemeine Zeitung,* April 21, 2021
[79] *See* "Jetzt will auch Brüssel die ewige Schuldenregel aufweichen" ("Now Brussels Also Wants to Soften the Perpetual Debt Rule"), *Welt,* May 1, 2021
[80] *See* Dufrêne, Nicolas et al: "Cancel the public debt held by the ECB and 'take back control' of our destiny", euractiv.com, February 5, 2021
[81] *See* "European Central Bank holds fire ahead of crunch June meeting", CNBC, April 22, 2021

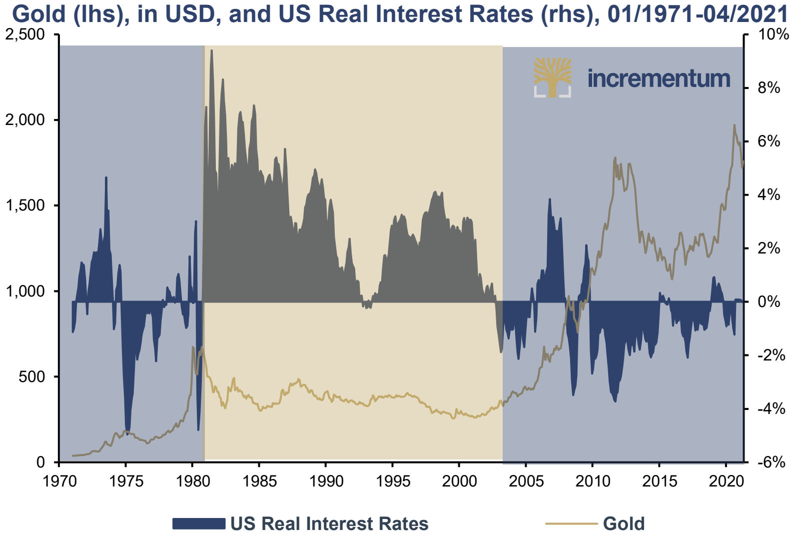
many years, if not decades. **A change in the monetary climate cannot be reversed overnight.**

They've done studies, you know. 60% of the time, it works every time!
Brian Fantana

Therefore, a repeat of the 1940s epoch in the US, described before – debt relief through a low interest rate cap coupled with high inflation – seems to be the most likely scenario. At times, one could almost get the impression that leading central bankers are virtually waiting for fiscal policymakers to show them the way. Not only because the central banks seem to be at the end of their rope, but also because they no longer want to control policy. **As in earlier times, they increasingly seem to see themselves as financiers of governments rather than guardians of currencies.**

Powell's 2018 rate hiking campaign will prove to be the last time (for a decade or two at least) a major central banker actively tries to raise real rates to a meaningful positive level.
Kevin Muir

A sustained turnaround in interest rates is therefore less likely than ever. It is probably more likely that the New York Jets will win the Super Bowl than that we will see sustained clearly positive real interest rates in the next decade.[82] Finally, leading central bankers are communicating quite openly that they will not allow yields to rise. In central bank-speak, this naturally sounds more innocuous. For example, the ECB has already reassured the markets, but especially the sovereigns, on several occasions that the ECB "will ensure favorable financing conditions".[83] In view of the expected serious distortions of higher real interest rates, it can be assumed that this announcement will hold true beyond the current pandemic period. **Negative real interest rates will therefore support the gold price for a long time.**



Source: Reuters Eikon, Incrementum AG

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82 Whereby we would like to point out that we have deep sympathy for the New York Jets!
83 *See* Siebelt, Frank: "EZB stemmt sich gegen Anstieg der Zinskosten für Staaten und Unternehmen" ("ECB braces for rise in interest costs for sovereigns and companies"), Reuters, March 11, 2021

Status Quo of Inflation Dynamics

> *"No one is ready for inflation, but I believe it's coming. Maybe not today or next week, but there is a powder keg of monetary supply just waiting to be unleashed by governments who think that inflation can never happen again. At first, markets will cheer a bit of inflation – then they'll panic."*
>
> Harris Kupperman

***Temporary* is what the pickup in inflation rates is supposed to be – central bankers never tire of emphasizing that these days.** The current rise in inflation is, they say, only a temporary front sweeping across the world.

Structural disinflationary tailwinds are morphing into persistent inflationary headwinds.
Henry Maxey

We take a different view. The current rise in inflation rates heralds a fundamental turnaround. Although one swallow does not make a summer, there are now countless swallows in the sky. **They herald a change, a monetary climate change. The newspapers are now full of reports about the unmistakable harbingers of this change:**

- "Procter & Gamble will raise prices in September to fight higher commodity costs"[84]
- "Kimberly-Clark Announces Price Increases for North American Consumer Products Business"[85]
- "Coca-Cola CEO says company will raise prices to offset higher commodity costs"[86]
- "Copper jumps to highest level in nearly 10 years. Wall Street pros believe there's more upside"[87]
- "Global Food Prices at Six-Year High Are Set to Keep On Climbing"[88]
- "Cost avalanche crushes farmers: Farm input prices explode"[89]
- "Baltic Dry Index Reaches Over 10-year High"[90]
- "Euro zone producer price growth accelerates in February"[91]
- "U.S. producer inflation heats up in March as prices increase broadly"[92]

We could provide numerous other examples, but our basic message is clear: Inflation is a topic again. That is why inflation, in its many facets, is a focus of this year's *In Gold We Trust* report. **While deflationary factors have been dominant in recent decades, they are increasingly weakening and are being overshadowed by inflationary dynamics – in the short, medium and long term.**

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[84] "Procter & Gamble will raise prices in September to fight higher commodity costs", CNBC April 20, 2021
[85] "Kimberly-Clark Announces Price Increases for North American Consumer Products Business", Kimberly-Clark press release, March 31, 2021
[86] Lucas, Amelia: "Coca-Cola CEO says company will raise prices to offset higher commodity costs", CNBC, April 19, 2021
[87] Stevens, Pippa, "Copper jumps to highest level in nearly 10 years. Wall Street pros believe there's more upside", CNBC, April 26, 2021
[88] De Sousa, Agnieszka and Durisin, Megan, "Global Food Prices at Six-Year High Are Set to Keep On Climbing", Bloomberg, January 7, 2021
[89] Zinke, Olaf: "Kosten-Lawine erdrückt die Bauern: Agrarkosten explodieren" ("Cost avalanche crushes farmers: Agricultural costs explode"), *Agrar Heute,* April 30, 2021
[90] "Baltic Dry Index Reaches Over 10-year High", *Maritime Professional,* April 26, 2021.
[91] "Euro zone producer price growth accelerates in February", *Global Banking & Finance Review,* April 8, 2021
[92] "U.S. producer inflation heats up in March as prices increase broadly", CNBC, April 9, 2021

Courtesy of Hedgeye

Short-term dynamics are particularly the following:

- The extreme monetary growth of 2020 is likely to weaken in the current year (if only because of the base effect), but it will nevertheless remain high. **An end to the ultra-loose monetary policy is not in sight, let alone a tightening of monetary policy**. Jerome Powell, for example, does not expect interest rates to rise before 2023.[93]
- **Leading central banks have – implicitly – come out in favor of capping bond yields.** Australia has already introduced a cap,[94] while the ECB explicitly ensures that the yields of member states' government bonds are not too far apart.
- Forced saving as a result of months-long closures has led to a further decline in the velocity of money. Savings rates have increased significantly. **The re-opening of the service sector will lead to a significant increase in demand and raise the velocity of money.**

The main medium-term dynamics are:

- The Federal Reserve has already shifted its inflation target upward by **switching to *average inflation targeting* (AIT).** Other central banks are considering similar adjustments.
- The debt situation, especially at the sovereign level, has deteriorated markedly. **Significant interest rate hikes or even a scaling back of the multi-billion-US-dollar bond-buying programs are virtually impossible.**
- **Globalization, which has a dampening effect on prices, has come under considerable pressure as a result of the Covid-19 pandemic.** As the fight against climate change is waged, further global economic disintegration is likely. For example, the EU has held out the prospect of introducing a CO_2 tariff. This will increase consumer prices directly through the higher tax burden and indirectly through the price increases resulting from trade disintegration.
- **The growing importance of ESG means that access to capital is becoming increasingly difficult for commodity producers.** There are many indications that alternative energies will make the energy mix significantly more expensive.
- The likely appreciation of the renminbi, which is the only major currency in the world to offer positive real rates, raises import prices for the rest of the world and thus inflationary pressures in China.
- **The increasing geopolitical tensions** between the US and China, as well as between the US and Russia, which the rest of the world cannot escape, could put a severe and lasting strain on existing trade relations.
- **There is a shortage of labor in certain industries**, rising minimum wages, and globally rising unit labor costs.
- The generational shift that is already taking place is bringing a generation into the political, economic and social leadership ranks that has never in its lifetime had the negative experience of severe inflation. It replaces a number of generations that experienced periods of high inflation, if not hyperinflation, firsthand during their lifetimes.

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[93] *See* Fitzgerald, Maggie: "Here's where the Federal Reserve sees interest rates, the economy and inflation going", CNBC, March 17, 2021
[94] *See* Pandey, Swati and Cole, Wayne: "UPDATE 3-Australia's central bank commits to keep 3-year yields low amid bond rout", Reuters, March 2, 2021

- **An increasing intertwining of monetary and economic policy can be observed.** In terms of personnel, Janet Yellen and Mario Draghi represent this development, but at the practical level the trillion-euro support measures have led, among other things, to the politicization of lending. The green transformation of the economy envisioned by influential political actors could further entrench this politicization of lending.
- **Central banks increasingly see themselves as active supporters of political programs, and thus as financiers of the state, rather than as monetary guardians.**

In the long term, the massive demographic change facing Europe in particular, but above all China, will have an inflationary effect.[95]

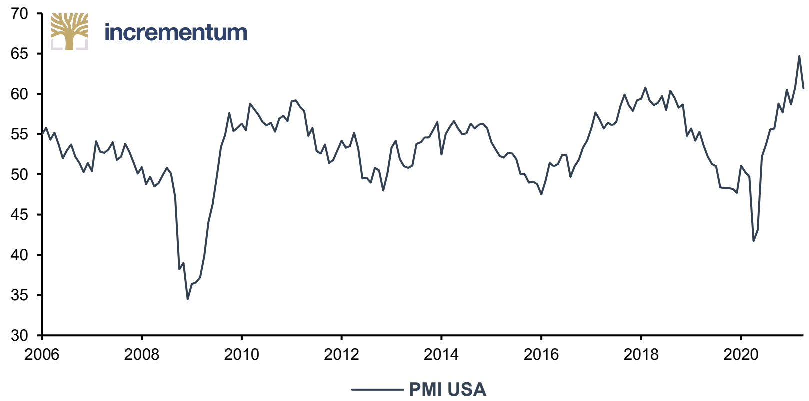
Signs of Monetary Climate Change

My own sort of central case is that for the first time in a long time, I am actually worried about inflation.
Stanley Druckenmiller

The extent to which the perception of an inflation threat has changed is shown by the fact that, even as recently as last year, forecasting rising inflation rates was regarded as the most abstruse contrarian position, something like an NFL team winning the Super Bowl in its own stadium. However, the Tampa Bay Buccaneers succeeded in doing just that in 2021, and now inflation is rising noticeably and has probably at long last reached the consumer.

The global price index from IHS Markit is currently showing the greatest inflationary pressure since August 2008. The latest surge in demand has been met by a Covid-19-induced supply shortage of goods and services. According to IHS Markit, the survey data point to a steep rise in consumer price inflation worldwide in the coming months. This is particularly true in the USA, where prices for consumer goods have risen especially sharply.[96]

PMI USA, 01/2006-04/2021



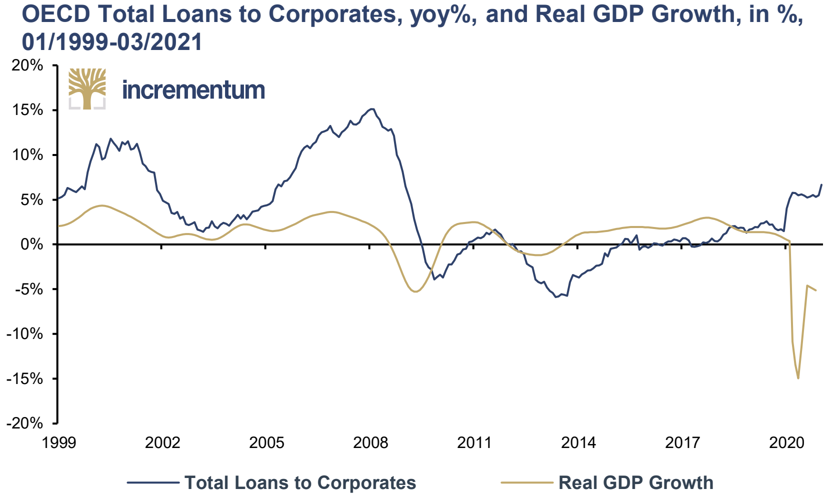
Source: IHS Markit, Incrementum AG

[95] *See* chapter "Global Demographics Turn Inflationary" in this *In Gold We Trust* report.
[96] *See* Williamson, Chris: "Global price gauge hits new high as input cost inflation accelerates sharply", IHS Markit, April 8, 2021

The markets have failed to notice that the baton of reflation has passed from central bankers to governments. With the passing of that baton, so passes the era of disinflation.
Russell Napier

A fundamental trend break in the way money is created may have occurred as a result of the Covid-19 pandemic.[97] The scepter of money creation has been handed over from commercial banks to politicians. Whether it is only "temporary" remains to be seen. But discussions of the green transformation of the economy suggest that it is a permanent change as part of the monetary climate change. **The era of politicization of credit may have begun.**

Now, what do we mean by that? Government loan guarantees have been a cornerstone of the pandemic stimulus measures. When a government guarantees to make up any shortfall in interest and principal on bank loans, it creates a significant incentive for banks to expand their balance sheets. A commercial bank takes no risk on such a transaction, but receives compensation in the form of interest payments.



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

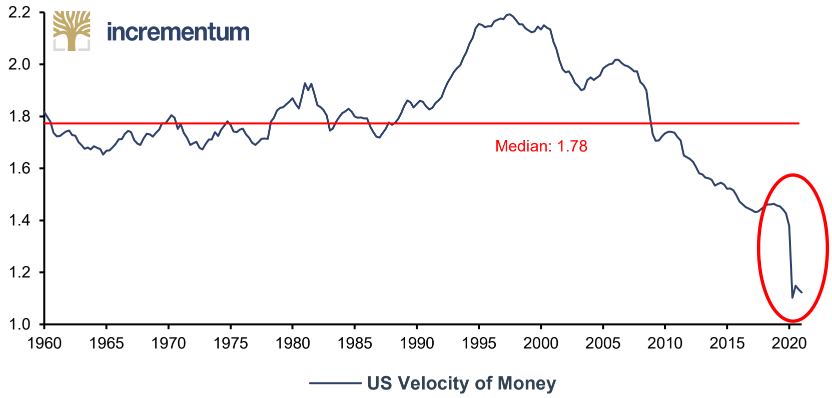
At a key tipping point, higher inflation will also trigger a rise in the velocity of money above what has been very low levels in the era of QE, thus guaranteeing the even higher nominal GDP growth necessary to reduce debt burdens.
Russell Napier

Are these just short-term emergency measures? Perhaps, but there are several signs that this is a strategic pivot and that policymakers are taking a liking to steering the economy. Governments could come up with the idea of exerting a much broader influence on the structure of the economy through a dirigiste credit policy, for example by ensuring that only more companies classified as "green" are eligible for state guarantees.

One important factor has had a significant dampening effect on the inflation rate since the outbreak of the Covid-19 pandemic. The velocity of money, which has already been weakening for years, has collapsed yet another time.

[97] *See* "Yield curve control, the biggest mistake of the ECB so far! Exclusive Interview with Russell Napier", YouTube, March 16, 2021

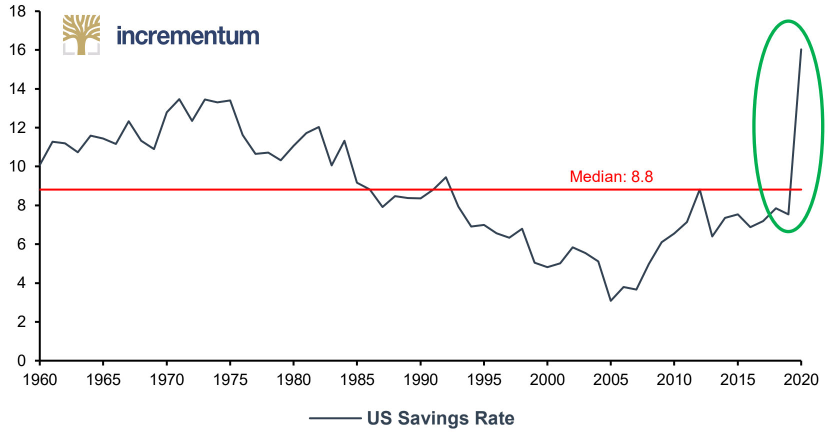
US Velocity of Money, Q1/1960-Q1/2021



Source: Reuters Eikon, Incrementum AG

In the US, the household savings rate as a percentage of disposable household income rose sharply last year. The savings rate in the USA is now almost as high as in Germany, which traditionally has a high savings rate. Also, in the euro area as a whole, the increase in the savings rate from 12.9% in 2019 to 19.7% last year was slightly higher than in Germany.

US Savings Rate, in %, 1960-2020



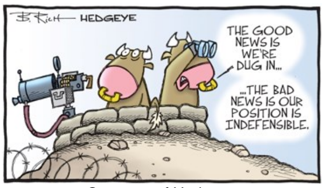
Source: Federal Reserve St. Louis, Incrementum AG

The main reason for the historic rise in the savings rate is that the extensive and prolonged closure of entire industries, primarily in the service sector, denied consumers the opportunity to spend money. **In contrast to this forced accumulation of savings, the motive of precautionary saving plays a much smaller role.**

…focus on the movement of liquidity… most people in the market are looking for earnings and conventional measures. It's liquidity that moves markets.
Stanley Druckenmiller

With the gradual reopening of the service sector, the savings rate will drop noticeably and, at the same time, the velocity of money will increase. This decline in the savings rate toward the long-term normal level will manifest itself more strongly in higher prices, the harder the supply side is hit by the months of closures. Thus, in the hard-hit tourism industry, many establishments may not even reopen, either because demand will remain below pre-Covid-19 levels due to continued limited travel opportunities, or because staff will have migrated out of the tourism industry in the meantime. If, on the other hand, a battle were to break out among suppliers for the shrunken tourism flows, the resulting pressure on prices would have a dampening effect on inflation. However, we consider the latter to be the much less likely scenario.

How Will the Federal Reserve Act in the Near Term?



Courtesy of Hedgeye

In our opinion, the Federal Reserve once again confirmed its position of the past months in the April FOMC meeting:[98]

- It will not tighten monetary policy, because it continues to view the pickup in inflation as merely *transitory*, that is, that it is due only to temporary commodity price inflation.
- It will not tighten monetary policy preemptively to prevent inflation as long as the situation on the labor market is tight.
- In line with their new interpretation of the inflation target of 2% on *average,* the current rise in inflation above the former 2% inflation target leaves them unimpressed – at least temporarily.

The definition of a central banker is someone who will permit inflation in anything except wages.
Russell Napier

In general, it appears as if the Federal Reserve is shifting its focus much more in the direction of the labor market and is also paying closer attention to issues such as inequality.[99] The impression is thus that the Federal Reserve is interpreting its mandate more generously.[100] On this side of the Atlantic, in a similar expansion of the mandate – not to speak of watering it down – speeches by leading ECB representatives increasingly sound like debate contributions by climate researchers.

Labor costs have a time-worn and constant 83% correlation with core inflation. Wages and salaries are running near a 1% annual rate. There is no lasting inflation without a wage cycle.
Dave Rosenberg

As we know, the Federal Reserve tends to neglect changes in commodity prices, because they are volatile. The Federal Reserve takes wage inflation much more seriously. That is, when wages rise rapidly they tend to drive up the cost of all other goods and services, creating the possibility of a wage-driven inflationary spiral that could be difficult for the Federal Reserve to contain. In general, Chairman Powell seems to regard price stability as important only insofar as it serves the goal of maximizing employment. This has been the standard argument of hard-currency countries on this side of the Atlantic for decades. They have always stressed that the short-term temptations of higher inflation should not be yielded to, especially for employment policy reasons**. ECB President Christine Lagarde does not share this view, as she stated before taking office, "*We should be happier to have a job than to have our savings protected.*"**[101]

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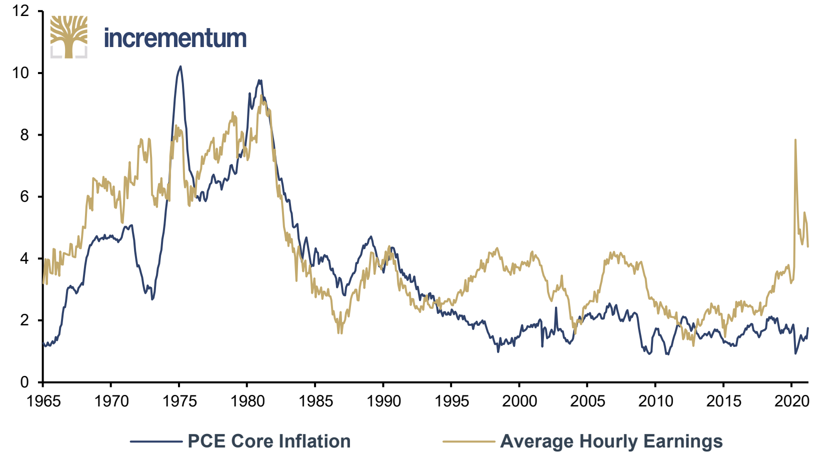
[98] "April 27-28, 2021 FOMC Meeting", Federal Reserve, April 27, 2021
[99] Powell, Jerome: "New Economic Challenges and the Fed's Monetary Policy Review", Federal Reserve Government, August 27, 2020, Brainard, Lael: "Full Employment in the New Monetary Policy Framework", Federal Reserve, January 13, 2021, Powell, Jerome H. "Getting Back to a Strong Labor Market", Federal Reserve, February 10, 2021
[100] As an outcome of its strategic monetary review in 2020, the Federal Reserve now wants to ensure that the Fed's dual mandate (stable inflation and full employment) is attained in an "inclusive" manner. Accordingly, impacts on women and on minority ethnic groups will be taken into consideration by the FOMC more than they have been historically. Also, policy decisions will be less sensitive to headline unemployment and inflation indicators as the Fed holds out for a more broad-based recovery. *See* "Breakfast with Dave", Rosenberg Research, May 13, 2021
[101] "Lagarde hits out at Germany and Netherlands on public spending", Financial Times, October 30, 2019

Change in Average Hourly Earnings, in %, and PCE Core Inflation, in %, 01/1965-03/2021



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

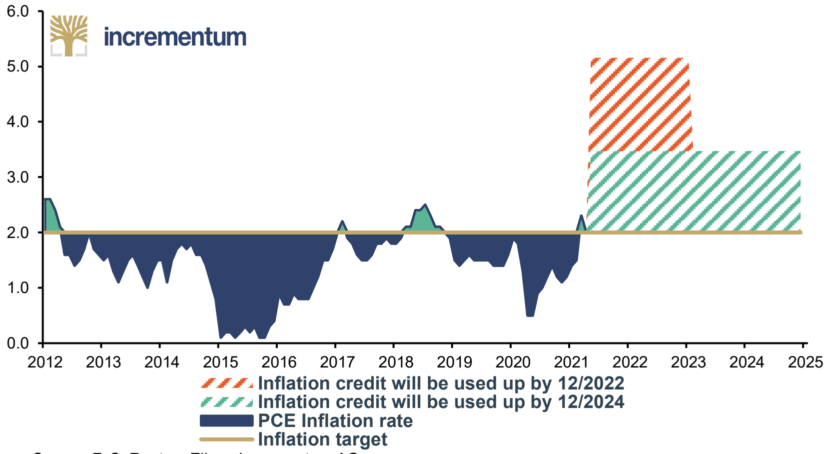
No more excuses. The Fed's mandate isn't to have a perfect world. That only exists in fairy tales, dreams, and the Fed's econometric models.
Danielle DiMartino Booth

Even before the crisis, the Federal Reserve considered introducing a rule that would allow inflation to overshoot its 2% target. On August 27, 2020, this significant change in the monetary policy target definition was finally announced at the (virtual) Jackson Hole symposium:

> *"In seeking to achieve inflation that averages 2 percent over time, we are not tying ourselves to a particular mathematical formula that defines the average. Thus, our approach could be viewed as a flexible form of average inflation targeting."*[102]

The implementation of this concept of *makeup inflation* will generally result in higher inflation-tolerance. **In our opinion, this turnaround in monetary policy will have significant consequences for the capital markets, especially for the bond market.**

Inflation Balance of the Fed, in %, 01/2012-01/2025



Source: FvS, Reuters Eikon, Incrementum AG

[102] Powell, Jerome: "New Economic Challenges and the Fed's Monetary Policy Review", Federal Reserve, August 27, 2020

In the old regime the Fed was trying to arrive on time. Now they are saying we are not going to arrive on time but instead … be late by design.
Bill Dudley

Average inflation targeting (AIT) becomes more problematic the longer the time frame for averaging. For example, suppose the Federal Reserve decides to average inflation at 2% over the decade since the 2% target was introduced. The target was set in 2012, so we use 2012 to 2025 for our thought experiment. From January 2012 to March 2021, the US inflation rate averaged about 1.4%. If the Federal Reserve targets an average inflation rate of 2%, this results in a "credit" of 66.3 percentage points on a monthly basis. This would allow the Federal Reserve to target inflation of 5.15% by 12/2022, or 3.47% by 12/2024. If the Federal Reserve only considers a five-year period for the inflation credit calculation, the result is an inflation credit of 29.5 percentage points, or an average inflation rate of 3.40% by 12/2022 and 2.66% by 12/2024.

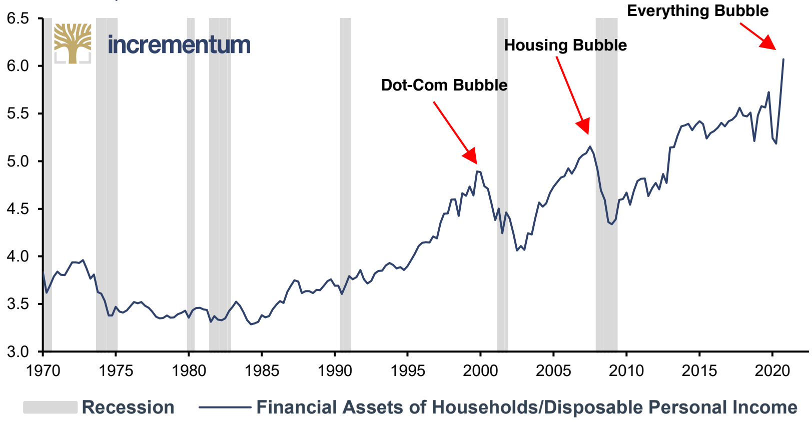
We can therefore conclude that the Federal Reserve will certainly keep its promise to "not even think about"[103] raising interest rates. **This is another indication that the current inflation developments are a structural phenomenon, a monetary climate change, and not just a temporary inflation front.**

Current Inflation Trend

Is there a risk of inflation? I think there's a small risk and I think it's manageable… I don't think it's a significant risk, and if it materializes, we'll certainly monitor for it but we have the tools to address it.
Janet Yellen

With these general thoughts on inflation in mind, let us now turn our attention to the current and, above all, to the future inflation trend. Where are we currently on the inflation map and where could the journey take us? The inflation sequence we are experiencing corresponds exactly to the Austrian Business Cycle Theory. Thus, asset prices have already risen massively in the course of the inflation process. Now the next phase, of rising consumer price inflation, could set in.

Ratio of Financial Assets of Households to Disposable Personal Income, Q1/1970-Q4/2020



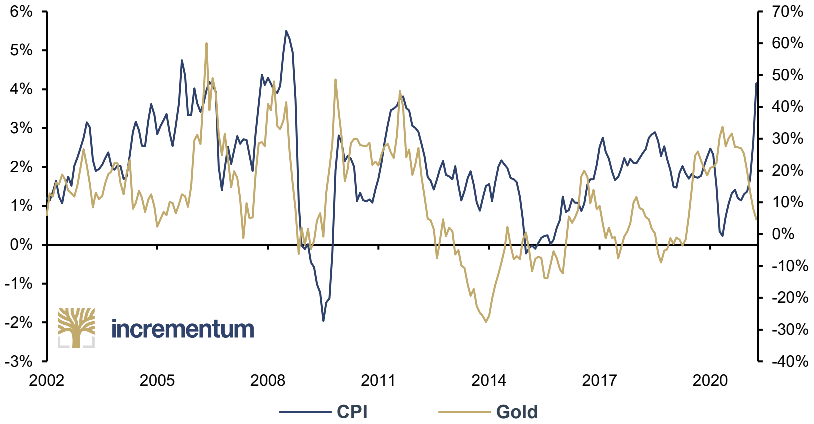
Source: Reuters Eikon, Incrementum AG

Nothing is so painful to the human mind as a great and sudden change.
Mary Shelley

Let's now take a closer look at the development of the CPI and the gold price. From the end of 2011 to the beginning of 2015, the inflation trend in the US was clearly downward. One can see that this disinflationary environment also meant headwinds for the gold price. Then, in August 2018, the CPI reached an intermediate high and subsequently trended weaker. The gold price was able to emancipate itself from the inflationary trend, primarily due to falling real interest rates.

[103] "Powell says Fed 'not even thinking about thinking' about rate hikes", *Financial Review*, June 11, 2020

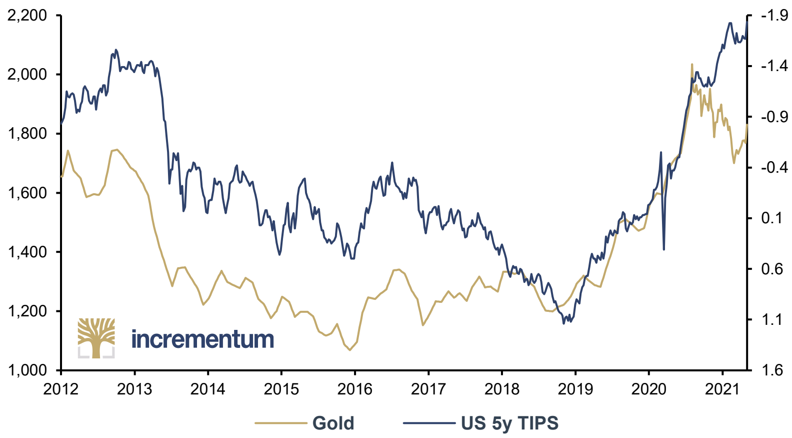
CPI (lhs), yoy%, and Gold (rhs), yoy%, 01/2002-04/2021



Source: Reuters Eikon, Incrementum AG

A high negative correlation to the gold price is shown by the yields of inflation-linked bonds. Comparing the gold price with the real yields of 5-year US Treasury inflation-protected securities (TIPS), we see that the breakout of the gold price in early 2016 was accompanied by rising inflation expectations. From early 2019, TIPS and gold prices moved in tandem, but since mid-August 2020 they have diverged**.**

Gold (lhs), in USD, and US 5y TIPS (rhs, inverted), 01/2012-05/2021



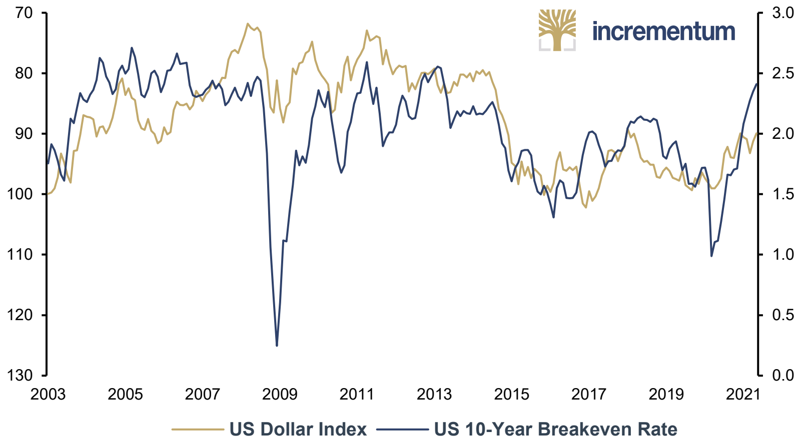
Source: Reuters Eikon, Incrementum AG

Central banks are fighting a deflation boogie man that does not even exist, creating a debt deflation monster in the process. The tail risk is the Fed goes too far down the rabbit hole unleashing a different kind of monster.
Tyler Durden

Since its March 19 low, the breakeven inflation rate[104] rallied to 2.51% in mid-May, exceeding its pre-pandemic value. **The momentum of the increase is enormous, so we would not be surprised to see a *breather* phase.** If the breakeven inflation rate remained at a high level, or at least above 2%, the Federal Reserve would have difficulty maintaining its "transitory" narrative.[105] As can be seen in the chart, the breakeven rates are highly correlated with the development of the DXY.

[104] The break-even inflation rate describes the yield differential between nominal government bonds and inflation-linked bonds (TIPS). It is a very reliable leading indicator of the inflation rate.
[105] *See* Rethfeld, Robert: *Wellenreiter Frühausgabe*, April 26, 2021

US Dollar Index (lhs, inverted), and US 10-Year Breakeven Rate (rhs), in %, 01/2000-05/2021

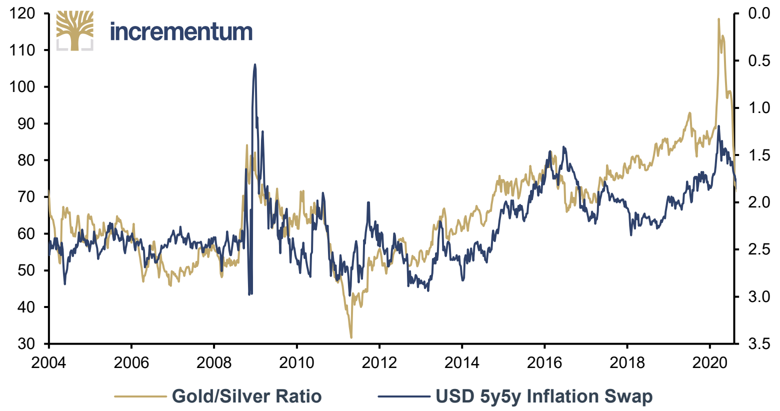


Source: Federal Reserve St. Louis. Reuters Eikon, Incrementum AG

...there exists a distinct possibility that the recovery that follows will be much more inflationary than the last.
Dave Rosenberg

The liaison between the 5y5y inflation swaps and the gold/silver ratio (GSR) also appears interesting.[106] According to our statistical analyses, a sustained gold price rise is unlikely if the GSR rises at the same time.[107] A falling GSR significantly increases the probability of a gold bull market. We are watching the current GSR situation particularly closely, precisely because the GSR has shown the impressive strength of silver relative to gold in recent months. A downward trend in the GSR would signal a positive outlook for gold on the one hand and rising inflation dynamics on the other.

Gold/Silver Ratio (lhs), and USD 5y5y Infation Swap (rhs, inverted), in %, 01/2004-05/2021



Source: Reuters Eikon, Incrementum AG

Let's now take a look at the "Pring Inflation and Deflation" Indices, developed our friend Martin Pring.[108] The indices track inflation-sensitive equity sectors such as mining and energy stocks and deflation-sensitive equity sectors such as banks, insurers and utilities. The inflation-deflation ratio has stabilized recently but is still well below the median.

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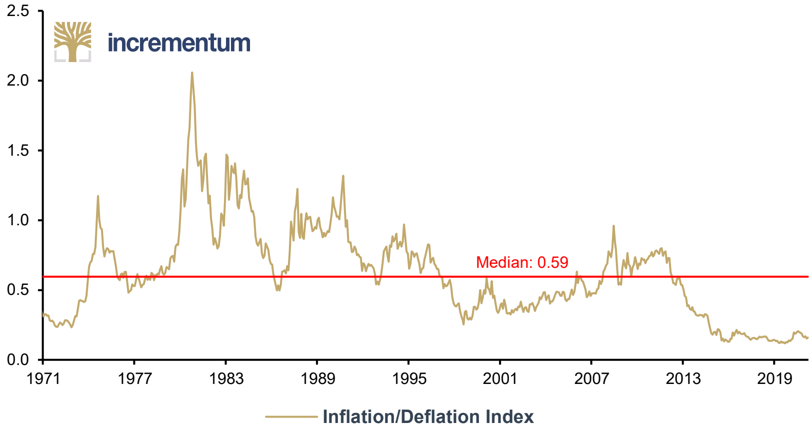
106 These inflation swaps show the market's expectation of the average level of inflation over 5 years in 5 years. The ratio is very useful for central bankers, as it tells them how the market expects monetary policy to affect inflation in the long term.
107 *See* "Technical Analysis", *In Gold We Trust* report 2018, "The Gold-Silver Ratio as an Indicator Measuring Inflation Momentum", *In Gold We Trust* report 2015
108 The indices are available on Stockcharts.com under the symbols: !PRII and !PRDI

Inflation/Deflation Index, 01/1971-03/2021



Source: Martin Pring, Incrementum AG

The Incrementum Inflation Signal

The first whiffs of either commodity inflation or wage inflation may cause a self-reinforcing set of market events which may include a sharp fall in bond prices, fall in stock prices, rapid increase in commodities…
Paul Singer

Our loyal readers know that we have developed a proprietary inflation signal to measure current inflation trends. From our point of view, it is helpful to look at the price developments of inflation-sensitive asset classes such as gold, silver, other commodities (BCOM), and even gold mining stocks in order to draw conclusions about the current inflation trend. We calculate the *Incrementum Inflation Signal* on a weekly basis from various subsignals based on financial market data. ***The Incrementum Inflation Signal* is a key input factor for our inflation protection strategies and serves as a guideline for asset allocation decisions.**[109]

Inflation Sensitive Assets (lhs), 100 = 01/2007, and Incrementum Inflation Signal (rhs), 01/2007-04/2021

Source: Reuters Eikon, Incrementum AG

In last year's *In Gold We Trust* report, we were already pointing out the then fledgling turnaround in the inflation trend. One year later, we do have reason to believe that the long-term turning point in inflation dynamics has indeed occurred.

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109 *See* "The fruit of our labor. Our investment funds.", Incrementum AG

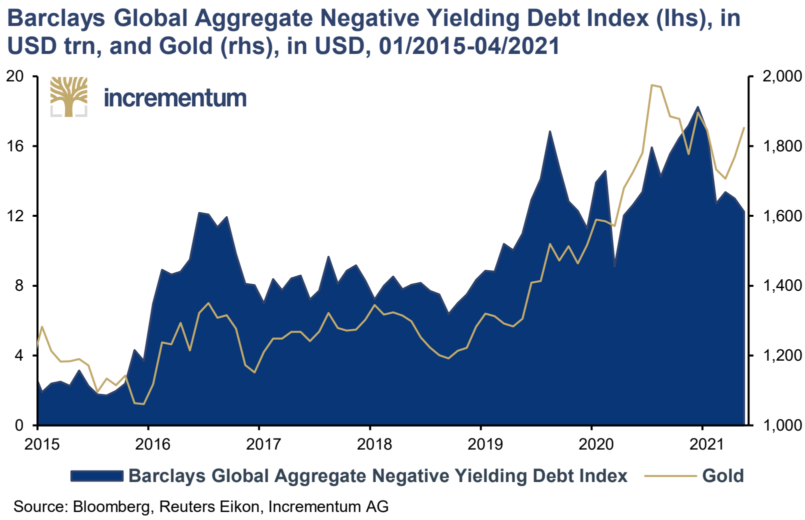
Commodity prices have been developing extremely well recently. In the short term, the consolidation of precious metal prices has slightly weakened the inflation signal; but despite everything, the inflation signal continues to point to a positive inflation trend very robustly, which in our view will increasingly concern market participants and consumers alike in the coming years.

Conclusion

Will inflation make as big a comeback as Manchester United did against Bayern Munich in the legendary 1999 Champions League final? Our answer is an unequivocal yes.[110]

It gradually led to a widespread (crazy) belief that inflation is an historical artifact, not a modern possibility.
Paul Singer

Yet many market participants continue to dismiss concerns about permanently higher price inflation as folly or a warning from doomsday prophets. This could be a painful and expensive misjudgment for many investors. Currently, government bonds to the tune of USD 12.2trn are traded with negative interest rates, an amount that is roughly equivalent to the GDP of the entire EU excluding the Netherlands. **For bondholders, inflation is likely to be the pain trade of the decade.**

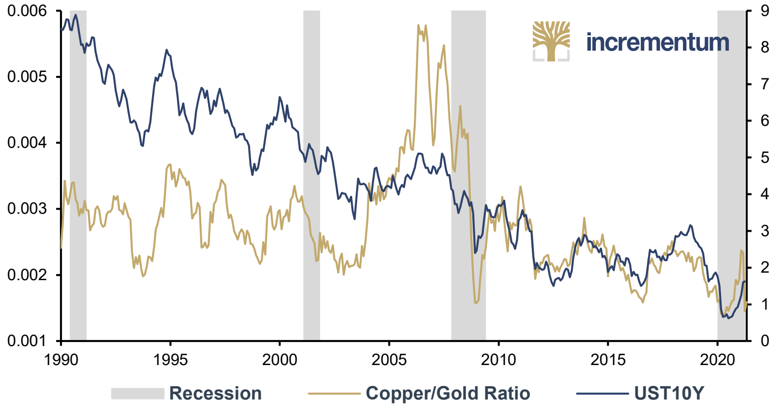


Funny how bonds were labelled "certificates of confiscation" back in the early 1980's when yields were 14%. What should we call them now?
Bill Gross

In addition to our inflation signal and the gold/silver ratio, we consider the copper/gold ratio, which shows a tight correlation with US Treasuries, to be an exciting inflation indicator.[111] If the trend reversal in the copper/gold ratio is sustainable, US Treasuries are likely to face increasing headwinds – headwinds that could, however, be stifled by the capping of bond yields. **In other words, a noticeable pickup in inflation would be the needle that would burst the bond bubble.** But the central banks – by means of yield curve control – will act as a protective shield for the bond bubble.

[110] ...even if those legendary 102 seconds at the end of regulation time continue to fill FC Bayern Munich supporters with deep pain.
[111] *See* Mayberry, Jeffrey M.: "The Power of Copper-Gold: A Leading Indicator for the 10-Year Treasury Yield", DoubleLine Funds, 2019

Copper/Gold Ratio (lhs), and UST10Y (rhs), in %, 01/1990-05/2021

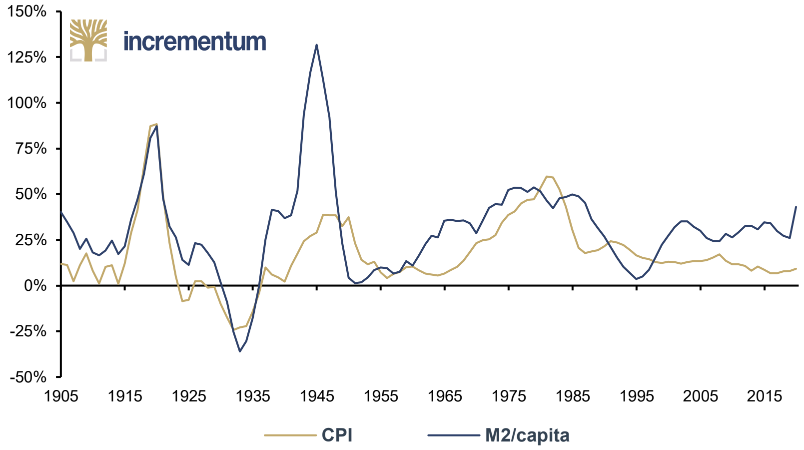


Source: Reuters Eikon, Incrementum AG

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

Other monetary indicators also suggest that, contrary to the statements of central bankers, the current rise in inflation is not a *temporary* phenomenon. Last year, for example, the 5-year rolling growth rate of M2 per capita picked up strongly. As the next long-term chart shows, inflation could follow suit in the near future.

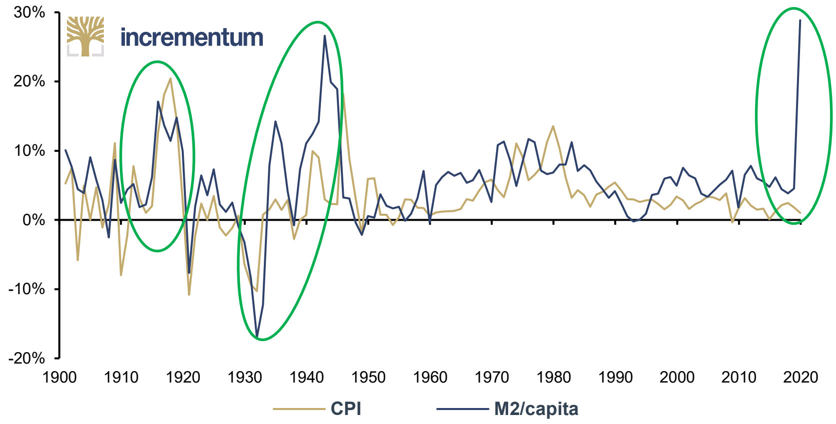
CPI, in %, and M2/capita (5-year rolling growth rate), in %, 1905-2020



Source: Lyn Alden, Nick Laird, goldchartsrus.com, Reuters Eikon, Incrementum AG

The close correlation between the development of M2 per capita and inflation becomes even clearer when the annual growth rates are compared. It can be clearly seen that the current 28-percentage-point difference between M2 per capita and the CPI is historically unique and suggests a strong looming increase in the CPI. A similar difference has occurred only once before, in wartime 1943, when inflation shot up to over 18% three years later.

CPI, yoy%, and M2/capita, yoy%, 1900-2020

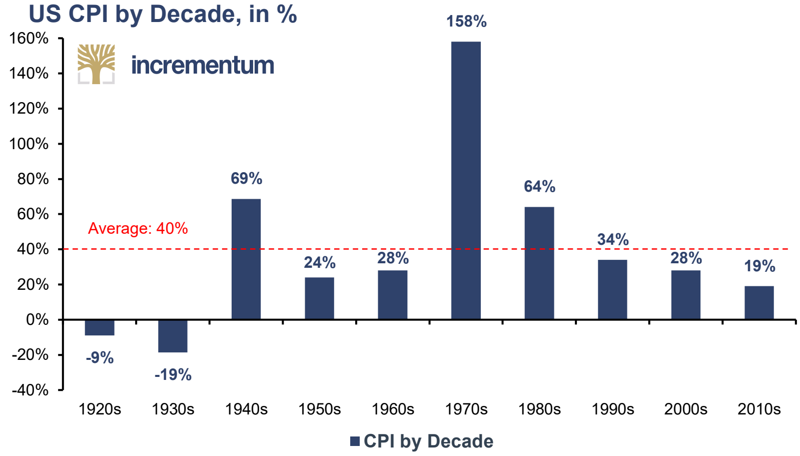


Source: Lyn Alden, Nick Laird, goldchartsrus.com, Reuters Eikon, Incrementum AG

Inflation is like toothpaste. Once it's out of the tube, you can hardly get it back in.
Karl Otto Pöhl

As soon as rising price inflation is seriously considered by market participants, the general market sentiment could change fundamentally and thus further fuel the monetary climate change. The currently still ubiquitous expectation that, in case of doubt, there will be further stimulus measures by central banks until the measures finally take effect, will be increasingly called into question in the event of rising inflation expectations.

US CPI by Decade, in %



Source: Bloomberg, Incrementum AG

Do not fear, do not predict, prepare… and thrive from change.
Artemis Capital Management

Man is a creature of habit. He would rather tread familiar paths than deviate from them. What makes sense and promises success in ordinary times is painful and expensive in times of fundamental change. As an investor, you should be prepared for this monetary climate change, otherwise your portfolio may suffer a loss nearly as great as the dinosaur population did when the sky went dark for years after the Chicxulub meteorite impact. **Back then, too, climate change claimed many victims.**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BRETT EPITHERMAL GOLD PROJECT
Vernon Mining Camp
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FRA 1XMA

Status Quo of Gold Demand

> *"The world's central banks and the International Monetary Fund still have vaults full of bullion, even though currencies are no longer backed by gold. Governments hold on to it as a kind of magic symbol, a way of reassuring people that their money is real."*
>
> James Surowiecki

We will now turn to the most important developments on the demand side, with our focus on central bank gold demand and investor demand.[112]

Central bank gold demand

The renaissance of gold as a reserve asset of central banks continued last year, albeit at a considerably slower pace. In 2020, the net inflows of central banks amounted to 273 tonnes, according to the World Gold Council. Compared to the record year 2019 with 668 tonnes, this is a strong minus.

Key developments in 2020:

- Turkey was the largest buyer with 131 tonnes, followed by India (41.7 tonnes), the United Arab Emirates (35.1 tonnes) and Russia (27.4 tonnes).
- 15 central banks made purchases of one ton or more.
- Eleven central banks reduced their holdings last year, including Mongolia (14.8 tonnes), Sri Lanka (12.9 tonnes) and Tajikistan (11.3 tonnes). Compared with 2009, official gold reserves now stand at 35,218 tonnes, 5,500 tonnes higher than at the end of 2009.

Managing new risks arising from the coronavirus pandemic also played a key role in the decision. The appearance of global spikes in government debts or inflation concerns further increase the importance of gold in national strategy as a safe-haven asset and as a store of value.
Hungarian National Bank

Hungary tripled its gold reserves from 31.5 to 94.5 tonnes in the spring of 2021. In a statement, the Hungarian National Bank (MNB) referred to the exploding global public debt in the wake of the Covid-19 pandemic, which is why Hungary is increasing its gold holdings for hedging reasons. As a result, Hungary's gold reserves per capita increased from 0.1 ounces to 0.31 ounces. **Thus, Hungary currently has the highest gold reserves per capita in Central and Eastern Europe.**[113] Hungary's monetary history, like Germany's, – is marked by hyperinflation. Indeed, Hungary leads the inglorious hit parade of hyperinflations. At the height of the hyperinflation of 1946, the monthly inflation rate of the pengő was 4.2 quadrillion percent and prices doubled every 15 hours.[114]

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[112] Other sources of demand, in particular jewelry demand and demand from the technology sector, will not be discussed in this chapter. For this purpose, we recommend the World Gold Council's "Gold Demand Trends", which is always worth studying.
[113] *See* "Magyar Nemzeti Bank Triples Hungary's Gold Reserves to 94.5 Tonnes", Magyar Nemzeti Bank, press release 2021
[114] *See* "Hyperinflation: Much Talked About, Little Understood", *In Gold We Trust* report 2019, Grossman, Peter Z. and Horváth, János: "The Dynamics of the Hungarian Hyperinflation, 1945-6: A New Perspective", Butler University, 2000

Over the course of a few years, we want to buy at least another 100 tonnes of gold and keep it in Poland as well.
Adam Glapinski
National Bank of Poland

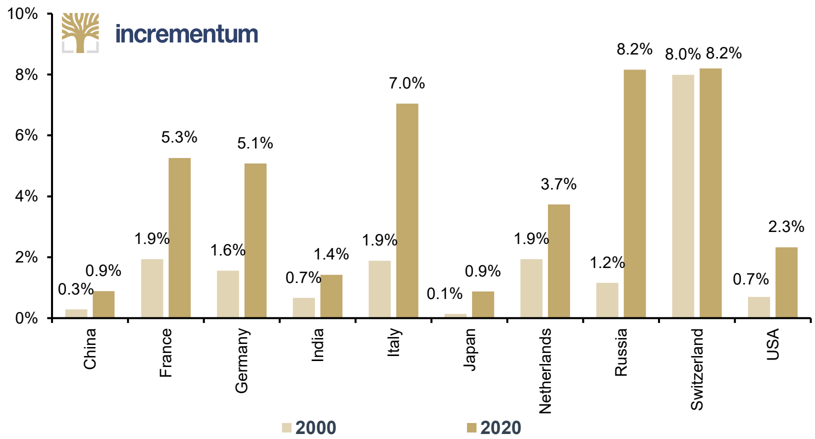
Poland, a close political ally of Hungary within the Visegrad countries, also reported that it plans to increase its gold reserves by at least 100 tonnes of gold in the coming years to improve the country's international image and demonstrate its economic strength.[115] The decisions by Poland and Hungary – both of which are EU member states but have not adopted the euro – to increase their gold reserves, as well as their planned domestic storage, show that the importance of gold as an anchor of confidence continues to grow.

It seems that domestic gold storage is enjoying increasing popularity. The Bank of England's vaults remain unchallenged in the rankings of the most popular storage locations, with 43% of central banks surveyed[116] storing at least some of their gold reserves in London, according to the Central Bank Gold Survey 2020 (which is well worth reading). However, this represents a significant drop of 13 percentage points since 2019, with domestic storage now preferred by 33% of respondents.[117]

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

The number of central banks buying gold is expected to remain high. 20% of central banks intend to increase their gold reserves in the next 12 months. This compares with just 8% a year earlier. The increase is particularly notable given that central bank purchases had already reached record levels in recent years. As motivations for the planned increase in gold reserves, 88% of the central bankers surveyed cited negative interest rates and expansionary monetary and fiscal policies in the wake of the Covid-19 pandemic. In addition, 79% of respondents ranked gold's performance in times of crisis as an important reason for holding gold. Compared to 2019, this represents a striking increase of 20 percentage points. Gold's lack of counterparty risk was cited by 74% of respondents as an important reason, up from 59% in 2019. In particular, demand for gold from central banks in emerging and developing countries is likely to continue to rise: 23% of the total of 155 EMDE[118] central banks said they intended to increase their gold reserves, compared with just 11% in the previous year.

Value of Gold Reserves in % of GDP in Top 10 Countries with Largest Gold Reserves, 2000 vs. 2020

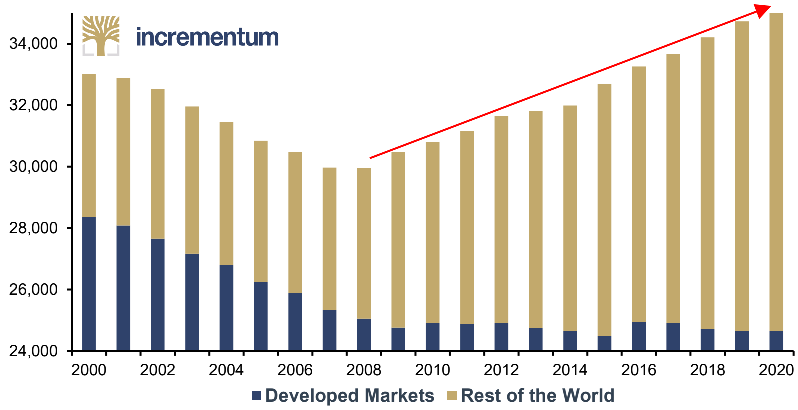


Source: IMF, World Gold Council, Incrementum AG

[115] *See* Spence, Edward, "Hungary Tripled Gold Reserves as Central Banks Turn Buyers Again", Bloomberg Quint, April 7, 2021
[116] *See* "2020 Central Bank Gold Reserve Survey", Gold Hub by World Gold Council, May 18, 2020
[117] *See* "2020 Central Bank Gold Reserve Survey", Gold Hub by World Gold Council, May 18, 2020
[118] EMDE: emerging markets and developing economies

Central banks have become a reliable factor on the demand side since the Great Financial Crisis of 2008/2009.[119] This shift may indicate a reassessment of gold's role amid ongoing financial and economic uncertainty and reflect long-term concerns about fiscal sustainability. However, increasing emancipation from the US dollar, owed in part to US monetary and economic policy reprisals, is also likely a motivator for the continued buildup of gold reserves. **Today, reported official gold reserves are only 9% below the all-time high of 38,491 tonnes in 1966.**

Global Central Bank Gold Reserves, in tonnes, Q4/2000-Q4/2020



Source: World Gold Council, Incrementum AG

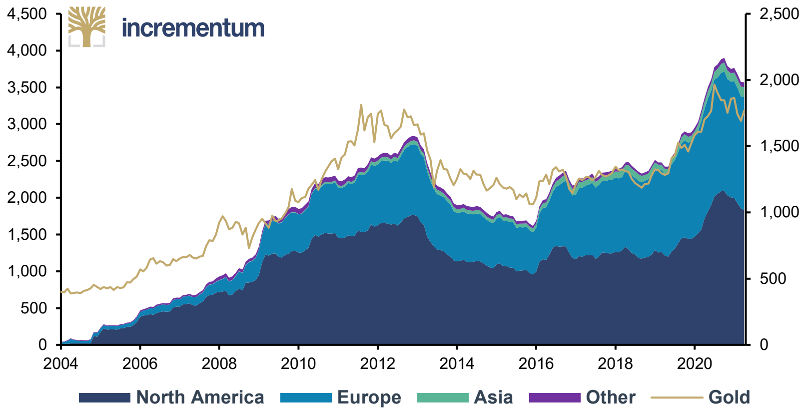
Investor Demand for Gold

Now we want to take a closer look at investor demand. We will particularly focus on private investment demand and ETF demand. Globally, investment demand grew by 40% to 1,772 tonnes in 2020. Investments in bars and coins were 3% higher, at 896.1 tonnes.

ETF demand in particular proved robust last year – despite a period of weakness in Q4. ETFs recorded record inflows of 877 tonnes, equivalent to a quarter of annual gold production. **As of year-end 2020, ETFs closed at a new record high of 3,751.5 tonnes.** To us, this metric is representative of Western financial investors choosing ETFs as their primary tool to manage their gold exposure. This is also reflected in the fact that inflows into gold ETFs follow an extremely procyclical pattern, i.e. rising prices lead to rising allocations and vice versa.

[119] From 1989 to 2008, central banks were net sellers of gold and represented an important part of the global gold supply, averaging 400 tonnes per year.

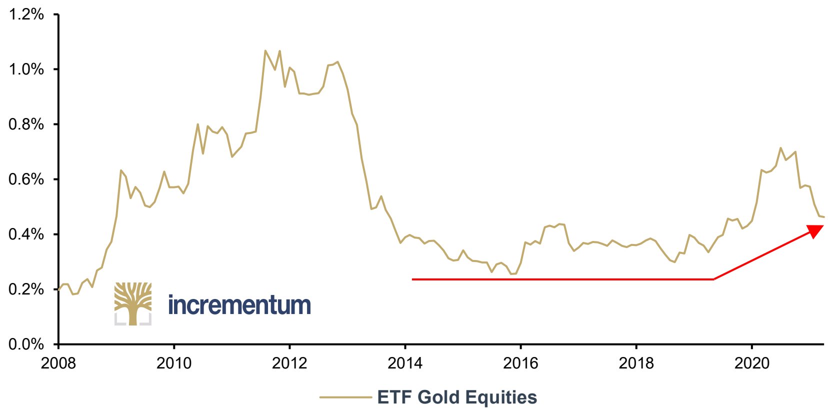
Accumulated ETF Holdings by Region (lhs), in tonnes, and Gold (rhs) in USD, 01/2004-04/2021



Source: World Gold Council, Incrementum AG

Despite these record results, the assets invested in gold ETFs are tiny compared to the overall US equity market. At the moment, the allocation is 0.5%, which is still significantly lower than in 2011–2012.

Gold held in ETFs as % of US Equities, 01/2008-04/2021



Source: Atlas Pulse, Reuters Eikon, World Gold Council, Incrementum AG

In 2021, the downward trend from Q4/2020 has continued so far. The minus in Q1/2021 amounted to 177.9 tonnes and thus significantly exceeded the outflow of the previous quarter in the amount of 130 tonnes.[120] In April global outflows slowed significantly, as European funds added assets for the first time since January.

Investor Demand for Gold

While jewelry demand – especially in Asia – collapsed in the first half of 2020, this was more than offset by investor demand in the West. In Europe, gold demand from private customers rose by 67% to 256.2 tonnes, reminiscent of the levels reached during the Great Financial Crisis.

While growth across Europe was robust, there was one clear outperformer: Germany restored its position as a global heavyweight, overtaking India to become the second largest retail market in 2020, with record

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120 *See* "Global gold-backed ETF holdings and flows", Gold Hub by World Gold Council, May 6, 2021

demand of 163.4 tonnes. **Measured in euros, this corresponds to an investment volume of EUR 8.1bn, surpassing the previous high of EUR 5.2bn set in 2011.**

Investor demand for gold in Austria

In the *In Gold We Trust* reports for 2019 and 2020, we dealt with investor demand for gold and highlighted the situation in Switzerland in each case.[121] We want to do that again this year, but this time we are taking a closer look at Austria.

In September 2020, *philoro Edelmetalle* published a representative study on Austrians' affinity for gold in cooperation with Karmasin Research & Identity.[122] Of the 2,000 representative respondents, 16% stated that they had already invested in gold bars or coins at some point, with an average of 13% of savings invested in gold. Among the respondents, this corresponds to an amount of EUR 13,298 per person. When asked in which asset class they would invest if they had a larger amount of money available, 49% answered real estate at the time of the survey in August 2020. Gold was only just behind with 44% of respondents. This was followed by a considerable margin by savings accounts with 24%, funds & bonds with 22%, and shares with 19%.[123]

Deficit spending is simply a scheme for the hidden confiscation of wealth. Gold stands in the way of this insidious process. It stands as a protector of property rights.
Alan Greenspan

The characteristics most in demand for gold were crisis security (61%), safe form of investment (49%), easy convertibility of gold into cash (40%), gold as a “tangible” asset (40%), and protection against currency risks (38%). 16% of respondents are likely to invest in gold in the next 12 months, with men (22%) and younger people aged between 18 and 29 (21%) showing above-average interest in investing in gold. In the eyes of the respondents, gold is the safest (51%), most valuable (54%) and most crisis-resistant (35%) form of investment. **With values of 41% (safe), 51% (value-retaining) and 27% (crisis-resistant), real estate takes second place in each category.**

The fact that Austria is a country with an affinity for gold is shown by the fact that since 1989 it has had its own gold coin of international repute, the Philharmoniker, minted in Austria by the Münze Österreich. People invested in gold in Austria own an average of 468 grams. **In total, the gold held by private individuals in Austria adds up to around 560 tonnes, which is twice the gold reserves of the Oesterreichische Nationalbank or about equal to the take-off weight of an Airbus A380, the world's largest passenger aircraft.**

Gold Demand in Asia

Now let us switch continents and take a detailed look at gold demand in Asia. The year 2020 saw a clear reluctance to buy, especially among the world’s largest gold consumers, China and India. The Covid-19 virus, or more specifically the policies to combat it, are leaving massive economic skid marks around the world. The gold market is not exempt from this.

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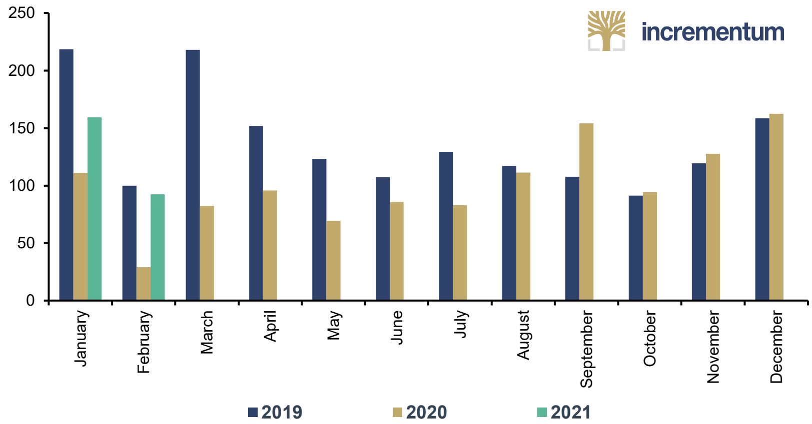
121 *See* “The Status Quo of Gold”, *In Gold We Trust* report 2020; “The Status Quo of Gold”, *In Gold We Trust* report 2019
122 “philoro präsentiert Goldstudie”, (“philoro Presents Gold Study”), philoro.at, September 29, 2020
123 Multiple answers were possible.

Like Liberty, gold never stays where it is undervalued.
John S. Morrill

Gold exports from the Hong Kong Special Economic Zone to Mainland China virtually collapsed. The People's Republic imported a net 40.9 tonnes of gold in 2020, around 85% less than in the previous year. This was due not least to the massive protests by the population of Hong Kong, which kept Chinese tourists from visiting the city on the Pearl River Delta. In any case, last year marks the lowest level of imports since 2008, and the figures for other major gold suppliers are hardly any different. Switzerland, for example, exported just 5.5 tonnes to China in December 2020, down from 41.4 tonnes in the same month last year. **Shanghai Gold Exchange (SGE) shipments also confirmed this trend for 2020, with around 400 tonnes less physical gold shipped on a net basis.**

SGE Gold Deliveries, in tonnes



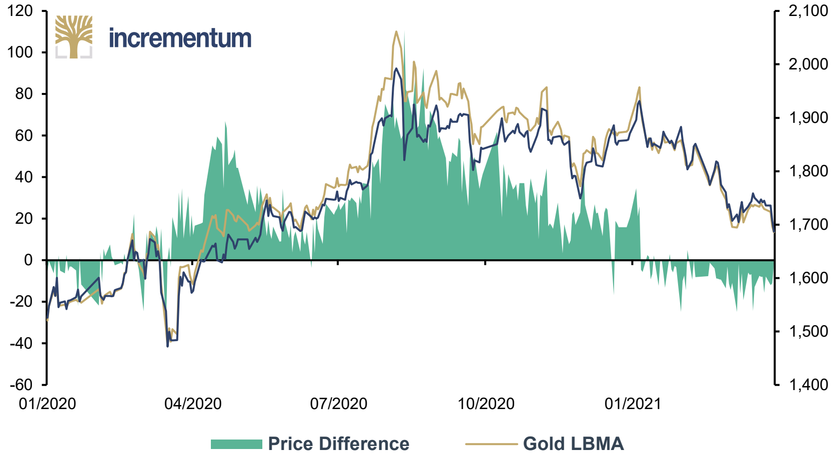
Source: SGE, Incrementum AG

But it was not only the private sector in China that held back on purchases. The PBoC also reported no purchases for 2020; but since the PBoC is not obliged to report or disclose its purchases, this does not necessarily mean anything. In any case, we assume that the central bank's actual holdings are significantly higher than those officially announced.

Markets are where buyers and sellers simultaneously agree on price but disagree on value.
Ben Davies

Remarkably, the SGE did not follow gold's price rise above the psychologically important USD 2,000 mark in early August 2020. At the high reached in Shanghai was the equivalent of about USD 1,975 per troy ounce. This meant that the SGE price was around 2.5% lower on the day of the all-time high marked in London. The spread between the closing price in Shanghai and the morning fixing in London was up to 5% during the bull run. Once again, the SGE strengthened its position as an indicator for price over- or undercutting on the Western exchanges. In January, the spread even turned negative – gold was traded more expensively in Shanghai than in London. **This is a signal from China that the downward movement in Q1/2021 was just as exaggerated as the rally in Q2 and Q3/2020.**

Price Difference per Ounce Gold LBMA and Gold SGE (lhs), in USD, and Gold LBMA and Gold SGE (rhs), in USD, 01/2020-03/2021



Source: Reuters Eikon, Incrementum AG

In the second half of the year, Chinese gold demand recovered and finally rose by 33% year-on-year to 63.6 tonnes in Q4 2020. However, the weakness of the first half of the year could by no means be compensated. It can be concluded that the low demand from China will not last. Even if one assumes that the economic recovery has not been as strong as communicated by the Chinese Communist Party, the figures show that Chinese demand has bottomed out. In any case, consumption picked up significantly for the Chinese New Year, and one can assume that this will also have an impact on the gold market.[124] Industrial and agricultural pollution, especially in the north and northeast of China, is back near pre-crisis levels.[125] **This is another indicator that the crisis is more or less over in China, at least from an economic perspective.**

India has two million gods, and worships them all. In religion all other countries are paupers; India is the only millionaire.
Mark Twain

Gold imports also collapsed in India last year. Just 275.5 tonnes were imported, the lowest level since 2009. Gold smuggling into India also collapsed almost completely. However, this is not due to the moderate tax relief on gold purchases – the government price surcharges fell overall from 14.6% to 12.3% – but rather to the hard lockdown in India, which made it impossible to enter the country by plane from classic gold trading centers such as Hong Kong, Dubai, and Istanbul. Moreover, Indians, just like the rest of Asians, are well-known anticyclicals. They buy into price declines and not into rising markets. This is also confirmed by the development of gold demand over the course of the year. **In Q4/2020, and thus at significantly lower prices, demand increased from both China and India. This trend also continued in Q1/2021.**

It seems interesting that digital gold platforms recorded a remarkable increase in sales during the Diwali festival. Leading digital platforms such as PhonePe registered a six-fold year-on-year increase in gold sales volume in the month preceding Diwali 2020, and Paytm reported an 86% increase in gold sales volume during the Diwali week itself.[126] **So Indian gold affinity is by no means history, but it is slowly shifting to other channels, namely digital ones.**

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[124] *See* Dan, Wand: "Spring Festival brings uneven consumption boost across China", CGTN, February 16, 2021
[125] *See* "Air Pollution Over China Returning to Pre-COVID Levels", SciTechDaily, March 16, 2021
[126] *See* "Digital gold gains currency in small cities", Mint, November 19, 2020

On the western edge of Asia, demand for bars and coins in Turkey more than doubled in 2020, reaching a record high of 121 tonnes. Strong growth was seen throughout the year, with the fourth quarter standing out with a 42% increase to 28.4 tonnes.

NSFR – Predicted Disasters (Almost) Never Happen

The comprehensive redesign of banking regulation in the wake of the 2007/2008 financial crisis is currently generating a lot of discussion in the gold community. At the end of June, a further building block, the net stable funding ratio (NSFR), will be implemented. This will bring years of debate – the concept of the NSFR was first presented by the Basel Committee on Banking Supervision (BCBS) on October 31, 2014 – to at least a provisional conclusion. In many countries, the NSFR already has to be complied with; in the EU, it will be mandatory in full from June 28, 2021, and in the USA from July 1, 2021. The UK, whose jurisdiction includes the London gold market, has postponed implementation to January 1, 2022. However, individual member states may decide to deviate from the BCBS requirements. For example, with reference to the peculiarities of the European banking system, the EU has calibrated the NSFR less strictly, and it will be implemented as part of the Capital Requirements Regulation II (CRRII).[127]

Liquidity is a coward, it disappears at the first sign of trouble.
Barton Biggs

The aim of the NSFR is to ensure that long-term assets are refinanced by correspondingly long-term liabilities. The aim is to limit maturity transformation – borrowing in the short term, lending in the long term – to such an extent that banks do not run into liquidity difficulties because they finance themselves on the liabilities side with much shorter-term and thus relatively unstable investments compared with the maturities of the assets on the assets side. **The NSFR is thus the longer-term brother of the liquidity coverage ratio (LCR), which is designed to ensure that commercial banks remain liquid during a 30-day stress scenario.**

The NSFR is defined as follows:

Available stable refinancing / Required stable refinancing ≥ 100%.

The NSFR must be at least 100% at all times, meaning that the available stable funding is always greater than or at least equal to the required stable funding.

To calculate both the denominator and the numerator, each individual balance sheet item to be considered is weighted by a factor. For the individual items of available stable funding on the liabilities side of the bank balance sheet, the so-called ASF factor is applied. This factor can be 0%, 50%, 90%, 95% or 100%. The more stable, i.e. long-term, an item on the liabilities side is, the higher the corresponding ASF factor.

[127] Regulation (EU) 2019/876 amending the CRR (CRR II) entered into force on June 27, 2019. In this regulation, the requirements on the NSFR will also be comprehensively revised and applicable from June 28, 2021

Available stable funding includes, in particular, most equity components with an ASF factor of 100%; deposits for which an ASF factor of 90%, 95% or 100% is applied, depending on the commitment period; and various funding instruments with an ASF factor of 0% or 50%, depending on the remaining term.

The factor for the required stable funding is referred to as the RSF factor. As a general rule, the shorter the remaining term of an asset, the less stable the funding must be. The more secure in nominal value an asset is in the bank balance sheet, the lower the RSF factor. The more liquid the market for an asset is, i.e. the more easily or quickly an asset can be sold without a price discount and thus quickly contribute additional liquidity, the less stable the financing must be.

Stability might not be everything, but everything is nothing without stability.
Steve Hanke

For example, coins, banknotes and central bank balances have an RSF factor of 0%; after all, their nominal value is permanently guaranteed. Government bonds with the highest credit ratings are assigned an RSF factor of 5%, corporate bonds with high credit ratings are weighted with an RSF factor of 15%, loans to banks with a residual term of 6 months to 1 year have an RSF factor of 50%, and all assets encumbered for longer than 1 year or even nonperforming loans have been assigned an RSF factor of 100%. This means that they must be hedged at full face value. After all, nonperforming loans can default completely or can only be sold at a high loss, if at all. Mortgage-backed securities (MBS) have an RSF factor of 50.

Gold finds itself in the second highest category with other physical commodities that are traded, with an RSF factor of 85%. This applies only to unallocated gold, while allocated gold is not subject to the NSFR. The high RSF factor results from the fact that gold has not been classified as a high-quality liquid asset (HQLA).

Early in the discussion on the introduction of the NSFR, the World Gold Council (WGC) approached the Federal Reserve and, with reference to assessments by some major banks, demanded that gold be assigned an RSF factor of 0%.[128] On its part, the LBMA, which supports the activities of the WGC, has lobbied for the reduction of gold's RSF factor to 50%, as this RSF factor was originally intended for gold.[129]

The LBMA fears that the high RSF factor will lead to banks leaving the gold market, due, among other things to the associated cost increases, which would negatively affect the liquidity of the gold market.[130] In a recently published joint paper by the LBMA and the WGC, the two institutions reiterate their fears to the responsible British regulator, the Prudential Regulation Authority (PRA).[131] However, these efforts have not been crowned with success so far.

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128 *See* World Gold Council: Comments of the World Gold Council, federalreserve.org, April 27, 2012
129 *See* Basel Committee on Banking Supervision: "International framework for liquidity risk measurement, standards and monitoring - Consultative Document", December 2009
130 *See* LBMA: Net Stable Funding Ratio Update, May 6, 2020
131 *See* LBMA und World Gold Council: The Impact of the NSFR on the Precious Metals Market, May 4, 2021

You have to choose (as a voter) between trusting to the natural stability of gold and the natural stability and intelligence of the government. And with due respect to these gentlemen, I advise you, as long as the capitalist system lasts, to vote for gold.
George Bernard Shaw

In the guidelines published on October 31, 2014, gold was reclassified to an RSF factor of 85%, and this classification has been maintained ever since. One reason for this classification was inadequate data, which the LBMA began to address through its own studies in November 2018.[132] In the LBMA's view, the results of the analysis would even justify classifying gold as "level 1 HQLA" or "extremely HQLA", as gold would actually perform better on each indicator than government bonds and covered bonds, i.e. collateralized bonds, classified as "level 1 HQLA".[133]

A reduction to 50% would alleviate the financing costs for gold, as fewer stable and thus cheaper sources of financing would be needed. The cost savings would naturally be even higher if gold were assigned an RSF factor of 0%, which is what the LBMA is aiming for in the long term. In the course of this discussion, the European Banking Authority (EBA) was tasked with reviewing the RSF factor for gold. **The related report, which is eagerly awaited, will be published on June 28, 2021.[134]**

Contrary to many articles and videos circulating on the Internet, the NSFR has nothing to do with the term *Tier 1 asset*. In fact, this term does not even exist: What is probably meant is *Tier 1 capital*. This refers to a specific form of equity on the liabilities side of the balance sheet, while the NSFR ensures that a bank's liquidity is guaranteed for a period of one year by matching assets and liabilities in terms of maturities and liquidity. The NSFR is thus designed to ensure that banks remain structurally liquid despite a sound capital base by restricting maturity transformation.

Conclusion

Gold is the inverse of paper, unlimited to the upside, limited to the downside. It's not the total stock of gold that matters, but the flow from those that already hold it.
FOFOA

Investment demand will be the key driver of the gold bull market, in our opinion. The weak phase in ETF demand should pass as soon as gold's months-long sideways movement has come to an end. The recent move may have heralded this turnaround in gold prices. For example, in March, India's gold imports rose to 160 tonnes, or USD 8.4bn.

According to the always worth reading *Gold Demand Trends* for Q1/2021,[135] gold demand has developed positively. Central banks bought a net 95 tonnes. With its strong year-on-year increase of 52%, jewelry demand (477 tonnes) more than compensated for recent strong outflows from gold ETFs (-177 tonnes). Demand for gold bars and coins increased by 36% to 339 tonnes. Particularly encouraging is the fact that jewelry demand in China (+211%) and India (+39%), as well as investment demand from both countries (China:+133%; India: +34%), recorded strong increases. Investment demand in the USA also remains at a high level. It was 26.3 tonnes in Q1 (+77% year-on-year), twice the five-year average of 12 tonnes.

In 2020, London remained the most important OTC trading center. The average daily (!) trading turnover was USD 110.4bn.[136] Exchange-traded derivatives (futures, options, forwards) amounted to USD 69.3bn. COMEX

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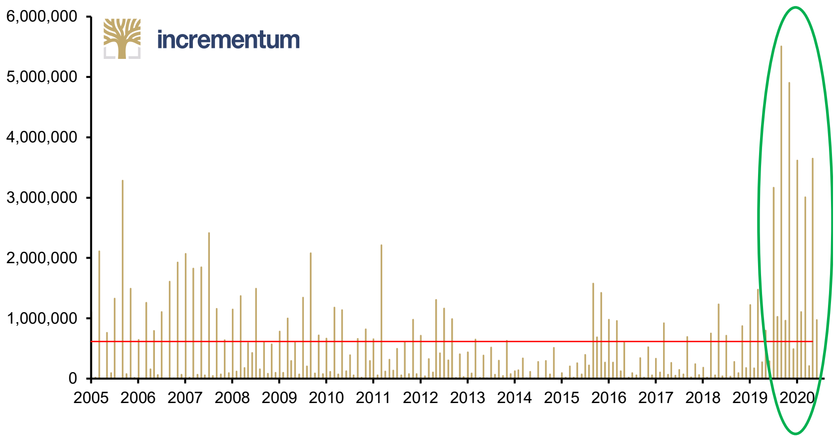
132 Basel Committee on Banking Supervision: "Basel III: the net stable funding ratio", October 2014
133 *See* "Net Stable Funding Ratio Update", LBMA, May 6, 2020
134 Regulation (EU) 2019/876, Article 510 (11)
135 *See* World Gold Council: "Gold Demand Trends Q1 2021", Gold Hub by World Gold Council, April 26, 2021
136 *See* "Trading volumes", Gold Hub by World Gold Council, April 30, 2021

accounted for the lion's share (USD 54.4bn), followed by Shanghai Gold Exchange (USD 6.2bn) and Shanghai Futures Exchange (USD 6.2bn). In comparison, the turnover of exchange-traded gold ETFs is miniscule. They amounted to USD 3.3bn per day in the previous year.

Let's get physical, physical
I wanna get physical.
Let's get into physical.
Olivia Newton-John

Another interesting trend is the strong increase in physical deliveries on the COMEX. Over the last 14 months, deliveries have averaged 2mn ounces, miles above the long-term average of 600,000 ounces. Similar developments can be observed in the silver futures market.

Comex Gold Deliveries, in thousands of ounces, 01/2005-03/2021



Source: CME Group, Goldchartsrus.com, Incrementum AG

What could be the reasons for this increasing desire for physical delivery?[137]

- In view of temporary supply shortages, the futures market was "converted" for the purchase of physical gold.
- A growing number of market players prefer physical gold to "paper gold" after confidence in institutions and the gold supply chain weakened in the wake of the lockdown crisis.

Going forward, central banks and institutional investors in particular will see greater demand for gold. Pension funds and insurance companies, which normally have a high proportion of (government) bonds, will have to fundamentally rethink their investment policy. Gold could play a major role in this. Catch-up effects in jewelry demand, once the coronavirus pandemic has been pushed back, should also support gold demand.

137 *See* Dr. Polleit, Thorsten: "Auf physisches Gold und Silber setzen. Dazu ist es noch nicht zu spät" ("Going for Physical Gold and Silver. It's Not Too Late"), Degussa Marktreport, July 30, 2020

Conclusion: Status Quo

> *"In order to achieve superior results, an investor must be able – with some regularity – to find asymmetries: instances when the upside potential exceeds the downside risk. That's what successful investing is all about."*
>
> Howard Marks

Last year we wrote at this juncture:

> *"In our opinion, a paradigm shift in the markets – towards rising inflationary tendencies – will take place in the coming years. It seems that we have come a significant step closer to this scenario. … We believe it is quite possible that we will at some point be facing a pronounced phase of stagflation in the decade ahead."*[138]

Courtesy of Hedgeye

We feel confirmed in this forecast, whereby we are currently still within the inflation *comfort zone* – but the emphasis is on "still". In view of the inflation data for April, which show a rise in US inflation to 4.2%, the "still" has to be revised to "just". This sharp increase was also due to the strong base effect in energy prices. However, even the core inflation rate increased by 3.0% year-on-year. The coming months will show how much the breakout from the comfort zone will solidify. **We consider a solidification of inflation above the level of recent years to be very likely.**

The expected returns and correlation dynamics change in different inflation regimes. In (hyper) inflationary regimes, in fact, both bonds and equities have not delivered well in real terms and have exhibited higher correlation.
Pascal Blanqué

Because further arguments suggest that the temporal adverb *temporarily* is to be applied only to the current phase of weakness in gold:

- **The relative valuation of commodities compared to equities remains historically extremely favorable.** For example, the GSCI Commodity Index (TR) is at its lowest level in 50 years compared to the S&P 500.
- Debt increased sharply across all sectors in 2020, and in many cases the rise in debt is likely to slow only slightly in 2021. Despite historically low interest rates, public debt in many countries has reached a level that should cause serious concern. **Substantial interest rate increases are therefore virtually out of the question.**
- **Inflationary pressures are intensifying and there is no end in sight to the upward pressure on prices.** Combined with the impossibility of significant interest rate hikes, negative yields will continue to be in place, which also allows the debt burden to be mitigated by recourse to the inflation tax.
- **Investment demand will be the key driver of the gold bull market, in our opinion.** The soft patch in ETF demand should pass once gold's months-long sideways move comes to an end. April may have heralded this turnaround in the gold price.

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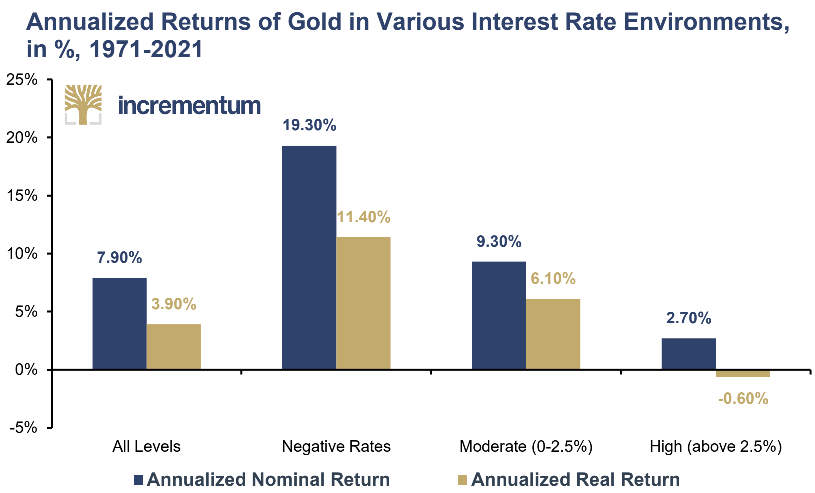
138 "The Status Quo of Gold", *In Gold We Trust* report 2020, p. 76

Last time US debt was this high, US real rates were negative for most of the next 35 years…
Luke Gromen

Although nominal interest rates have risen in recent months, they remain historically low and mostly negative in real terms. According to an analysis by the World Gold Council that is worth reading, real US interest rates would have to rise above 2.5% to have a significant long-term negative impact on the gold price.[139] This is also confirmed by our quantitative evaluations of previous years.[140] In an environment of negative real interest rates, gold's average annualized performance is 19.3% in nominal terms and 11.4% in real terms. Only at interest rate levels above 2.5% does the gold price face headwinds. **Based on the debt levels that have been reached, you, esteemed readers, probably know our opinion: Negative real interest rates are the *new normal*.**



Source: World Gold Council, Incrementum AG

With each paradigm shift in inflation, the dynamics of returns and correlations fundamentally change in line with policy and mass sentiment. If investors believe that the Federal Reserve will achieve its inflation target, we might see the correlation between bonds and stocks turn positive. This creates a situation that Gerard Minack aptly described: "*So now you've got two problems for your bond portfolio. It's not giving you the returns it used to, and it's not giving you inverse correlation.*"[141]

As can be seen in the next table, commodities and gold by far show the largest inflation beta.

[139] *See* World Gold Council: "Investment Update: Rates pose risks but also unlock opportunities for gold", Gold Hub by World Gold Council, April 21, 2021
[140] *See* "Portfolio Characteristics: Gold as Equity Diversifier in Recessions", *In Gold We Trust* report 2019
[141] *See* Williams, Grant: "Things That Make You Go Hmmm…", April 2021

Inflation Beta and Average Annualized Real Returns by Asset (1970–2020)

Asset class	Inflation Beta	Average annualized real return		
		Performance over the entire period	Performance in phases of rising inflation	Difference
Raw materials	4	4.2%	14.6%	10.3%
Gold	2.1	6.1%	15.7%	9.7%
REIT's*	0.7	9.8%	1.1%	-8.8%
1-5Y TIPS**	0.5	0.9%	0.1%	-0.8%
High yield bonds	-0.4	5.0%	-0.9%	-5.9%
10Y TIPS***	-0.5	6.3%	2.1%	-4.2%
S&P 500	-0.7	7.9%	-0.4%	-8.2%
Corporate Bonds (BAA)	-0.8	4.5%	-1.2%	-5.7%
10Y US Treasuries	-1.1	3.3%	-3.7%	-7%

Source: Bloomberg, Federal Reserve St. Louis, Verdad, Incrementum AG
*REIT: Data available as of 1990 (Dow Jones REIT Total Return Index),
** Short-duration TIPS as of 2005 (Barclays 1-5Y TIPS Total Return Index),
*** Long-duration TIPS as of 2000 (Barclays 10Y+ TIPS Total Return Index)

Gold has unique portfolio characteristics, and it will serve as a central store of value in our new inflation regime. Let us recap the key benefits of gold:[142]

- Increased portfolio diversification: The correlation of gold with other assets is 0.1 on average.
- Effective hedge against tail risk events
- Highly liquid investment: The liquidity of gold is significantly higher than that of German bunds, British gilts, US Treasuries, and the most liquid equities.
- Portfolio hedging in times of rising price inflation rates as well as in strongly deflationary times (but not in times of disinflation!)
- Currency hedge: Gold correlates negatively with fiat currencies, especially the US dollar.

There are more questions than answers. And the more I find out the less I know.
Johnny Nash

Gold's function as a hedge against inflation and tail events may prove to be its most important feature in the years ahead. Part of gold's robustness against tail events is the sheer number of historical events and institutions it has survived. One could use the Lindy effect as an explanation here. The Lindy effect states that the future life expectancy of an idea continues to increase with its age. That is, the longer an idea has been around, the more likely it is to last longer.[143]

Experience shows: If you go down a wrong path long enough, you will finish it.
Golo Mann

Is gold now already "too expensive"? We often hear this question from clients, journalists, and private investors. Despite the significant nominal price increase in the previous year, it should not be forgotten that in an inflation-adjusted view, the real all-time high from 1980 of USD 2,308 is still far away.

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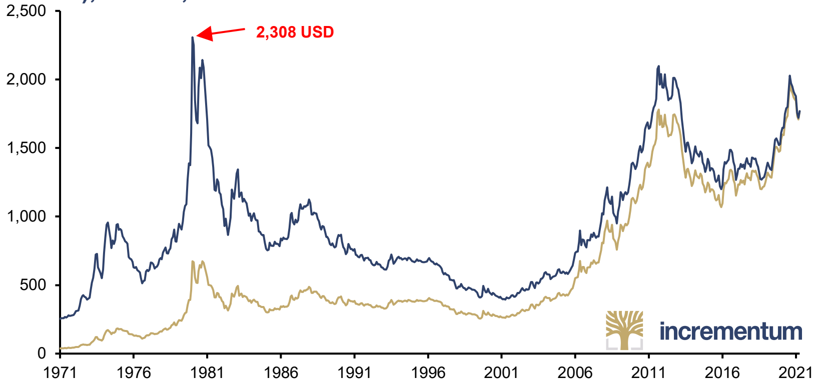
[142] On the special portfolio properties of gold, *see* "Gold in the Context of Portfolio Diversification", *In Gold We Trust* Classics
[143] To better understand how gold came to be the first currency, *see* "Regression Theorem Explains Why Gold Equals Money" *In Gold We Trust* Classics.

Gold (nominal), in USD, and Gold (inflation adjusted - April 2021 USD), in USD, 01/1971-04/2021

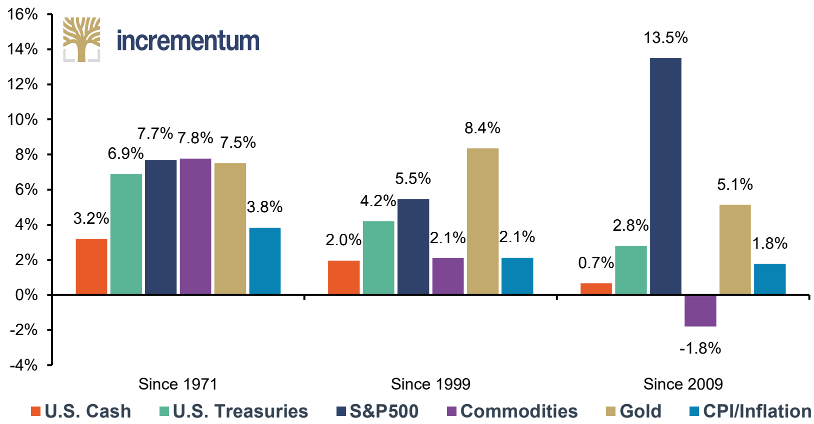


Source: Reuters Eikon, Incrementum AG

None of us has the luxury of choosing our challenges; fate and history provide them for us. (…) Our job is to meet the tests we are presented.
Jerome Powell

In this detailed assessment of the status quo, we have highlighted various aspects that are relevant for the gold price trend. One thing is certain: The expansion of the money supply, the negative real interest rate level, and the disproportionate expansion of debt have made the monetary system yet more fragile.[144] **We therefore believe more strongly than ever that gold is a multidimensional portfolio building block with anti-fragile properties that will play to its full strength in the coming years.**

Compound Annual Growth Rates of Financial Assets



Source: World Gold Council, DGYDJ, Voima, Incrementum AG

144 *See* "Gold in the Context of Portfolio Diversification", *In Gold We Trust* report 2016

In Gold We Trust Extra: The Gold/Wiesnbier Ratio[145]

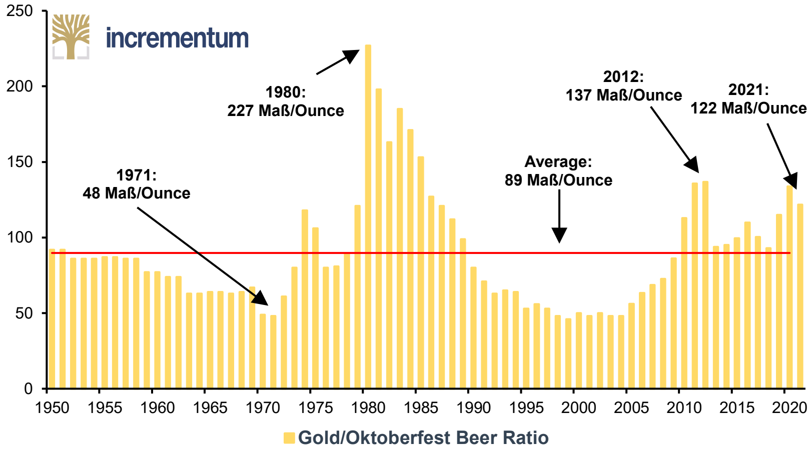
I think this would be a good time for a beer.
Franklin D. Roosevelt

Covid-19 has indeed turned the world upside down in many ways – and will continue to do so in the coming months. Munich's Oktoberfest, for example, will likely fall victim to the Covid pandemic again this year. Dubai, on the other hand, has announced its intention to hold an Oktoberfest this fall. [146]

For a quart of ale is a dish for a king.
William Shakespeare

Nevertheless, against all odds, we want to keep the tradition and calculate the Gold/Oktoberfest beer ratio. For the second time, we have to estimate the price of a Maß of *Oktoberfest beer*. Once again we have extrapolated the price increase from 2018 to 2019, which was 2.6%. One Maß (=1 liter) thus costs EUR 12.40.

Gold/Oktoberfest Beer Ratio, 1950-2021



Source: Reuters Eikon, Statista, Incrementum AG

During the Corona pandemic, the Gold/Oktoberfest beer ratio was basically very favorable for the gold-savvy beer connoisseur. Last summer, when one or the other beer could be enjoyed in a beer garden after all, the Gold/Oktoberfest beer ratio rose to as much as 146 in the meantime.

I am a firm believer in the people. If given the truth, they can be depended upon to meet any national crisis. The great point is to bring them the real facts, and beer.
Abraham Lincoln

After the summer high, beer lovers with an affinity for gold were left a little high and dry, in two senses. The months-long closures of pubs, bars and taverns weakened the beer craze to such an extent that many breweries had to throw away beer that had gone stale on a large scale. Creative entrepreneurs are taking advantage of the situation to process the undrunk beer elsewhere, for example into bread.[147] On the other hand, the weakening gold price since the all-time high has also had a negative impact on the beer purchasing power of gold. It currently stands at 122, 12 measures lower than last year. But we are sure that this double thirst phase will soon come to an end: Pubs, bars and beer gardens will open again and the beer purchasing power of gold will increase.

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[145] We take a closer look at the Gold/Oktoberfest ratio in an annual *In Gold We Trust* special in the fall, when the Theresienwiese is in full swing. We will keep it that way this year, even if the Oktoberfest will only take place virtually. *See* "O'zapft is! - The Gold/Wiesnbier Ratio 2020", *In Gold We Trust* special 10/2020
[146] *See* "Oktoberfest in Dubai: Das steckt dahinter", ("Oktoberfest in Dubai: That's what's behind it"), BR24 Nachrichten, April 29, 2021
[147] *See* "Hofgeismarer Bäckerei Amthor beteiligt sich an der Rettung von Lebensmitteln", ("Hofgeismarer bakery Amthor participates in food rescue"), HNA, April 25, 2021

Mining Stocks and Real Interest Rates: An Unsurprising Relationship

"From a strictly economic point of view, buying gold in a major inflation and holding it probably presents the least risk of capital loss of any investment or speculation."

Henry Hazlitt

Key Takeaways

- Given the likelihood of declining real interest rates over the next 3-5 years, it is worth considering the dynamics between real interest rate developments and the gold mining sector's performance.
- Our analysis reveals that the sensitivity between gold and gold mining stocks during periods of declining real interest rates increases significantly. Gold and mining stocks were 92% correlated during periods of declining real interest rates. The increased sensitivity between these assets signals that the market understands them both as safe havens against inflation.
- The right mining stock rebalancing strategy beats traditional portfolios during times of declining real interest rates. A portfolio which rebalances at the end of credit cycles to 81% S&P 500 and 19% BGMI outperforms the S&P 500 with lower volatility.
- Physical gold remains an important feature of one's portfolio, as it outperforms the S&P 500 significantly while achieving similar returns to gold mining stocks during equities bear markets.

You almost feel like capitalism died in this last month.
Chris Cole, April 2020

The global economy has been fundamentally altered by the events of 2020. From skyrocketing valuations of technology stocks to the zombification of much of our old economy and the scarring of our service sectors, it would be preposterous to call our present economic situation "familiar". However, within the gold mining sector the proverbial planets have aligned and the situation in the industry and macro dynamics currently resemble those of several familiar periods of history.

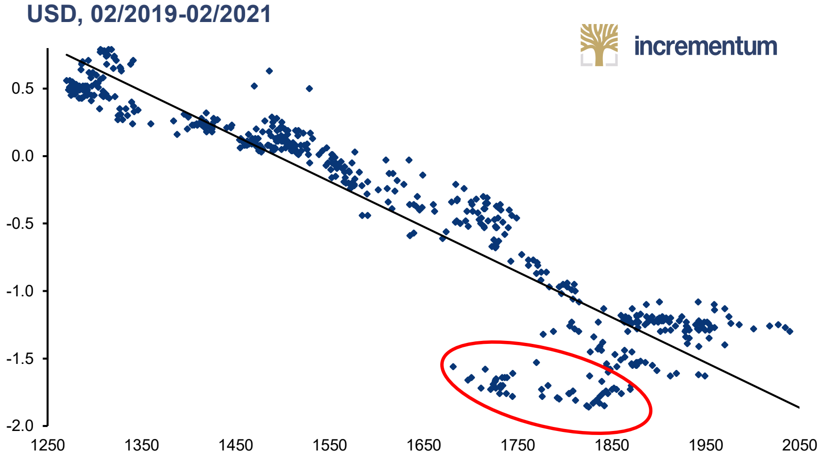
In this chapter, we consider the trends that signal a potential upswing in the gold mining sector in the coming years. Special emphasis is placed on our quantitative examination of these familiar periods of history. We end with specific considerations on portfolio construction considering these forecasts.

A Note on Gold's Recent 'Struggle'

Don't look for mistakes, look for solutions.
Henry Ford

2020 held many surprises for our largely unsuspecting world, not the least of which were the bizarre patterns – or rather, the complete break from pattern – in gold's price movements. Over the past few months, gold's behavior has grown increasingly strange, particularly considering the interest rate dynamics unfolding in the background. The chart below demonstrates how the relationship between gold and the 5-year real rates deviates significantly from the dynamics of its historical relationship.

Treasury 5-Year Real Yield Curve (y-axis), and Gold (x-axis), in USD, 02/2019-02/2021



Source: Reuters Eikon, Incrementum AG

Our dear friend Kevin Muir, author of the highly recommended *Macro Tourist* newsletter, released a piece explaining gold's recent price action and determining how gold performs in different yield curve environments.[148]

One increasingly popular argument supposes that rising nominal interest rates have been causing gold's lackluster performance. However, Muir points out that gold follows real interest rates, a fact we will

[148] *See* Muir, Kevin: "Revisiting Our Old Yellow Friend", The Macro Tourist, February 19, 2021

confirm in the course of our analysis. His investigation, though, follows a markedly different direction. Muir conducted a study on the 2/10-year yield curve and the 5/30-year yield curve. By comparing moving averages with gold's performance, he determined that gold has historically outperformed during periods of rising nominal interest rates.

So, when people tell me that gold is declining today because of the increase in long-term interest rates, I tell them to check their history books. Gold responds to real rates - not nominal ones.
Kevin Muir

Muir distinguishes between two kinds of periods: those in which nominal interest rate curves are steepening and those in which they are flattening. Steepening curves occur when long-term debt yields increase relative to short-term yields. Conversely, flattening curves occur when long-term yields are decreasing compared to short-term yields. This is, of course, at odds with the nominal interest rate explanation for gold's recent lull. The following table shows gold's relationship in the context of nominal interest rates. This relationship decreases the likelihood that gold's underwhelming performance these past few quarters can be attributed to rising nominal rates.

Gold Cumulative Performance, 1977-2021

2/10-year curve

Moving Average	Steepening	Flattening	Steepening outperformance
50-day	192.40%	137.80%	54.67%
200-day	194.50%	126.90%	67.58%

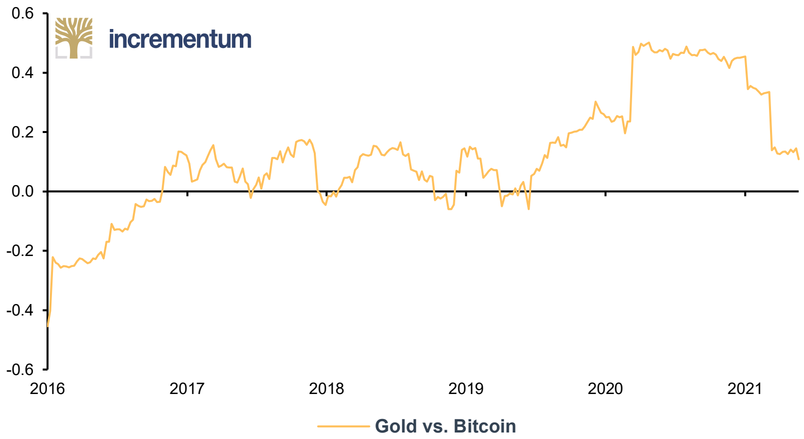
5/30-year curve

Moving average	Steepening	Flattening	Steepening outperformance
50-day	243.50%	86.60%	156.90%
200-day	248.60%	72.70%	175.87%

Source: MacroTourist, Incrementum AG

Kevin Muir goes on to suggest that media attention and wealth shifting to Bitcoin has been the greatest cause of gold's weakness. Even as recently as fall 2020, Bitcoin and gold were correlated. Since then, the correlation has almost completely broken down.

Weekly 1-Year Rolling Correlation: Gold vs. Bitcoin, 01/2016-05/2021



Source: Reuters Eikon, Incrementum AG

Bitcoin's market cap has grown from USD 170.1bn in January 2020 to USD 1trn in May 2021. It is likely that Bitcoin has grown in legitimacy and is now a worthy contender as a safe haven during this period of increasing uncertainty. There is at least some anecdotal evidence to support this, including "Bond King" Jeffrey Gundlach's tweet stating that "*Bitcoin may be The Stimulus Asset. Doesn't look like gold is*."[149] Given this strange turn in the global economy, it is worth considering how other assets linked to gold have fared in the course of recent events. **One prime candidate for investigation are gold mining stocks.**

Gold Mining Stocks and Credit Cycle Revaluations

While 2020 was full of myriad turns, one could do worse than to read the tumultuous year as simply the end of a long credit cycle fueled by the easy-money policies of the preceding decade. From this, one must further understand that uncertainty is inherent in the nature of credit cycles. However, they do have one persistent relationship with the gold mining industry. To better understand how wealth may be better preserved against credit-cycle corrections going forward, it will be useful to understand the unique dynamics between the gold mining industry and credit cycles.

Monetary policy does not work like a scalpel but more like a sledgehammer.
Liaquat Ahamed

Conceptually, gold is linked to the end of credit cycles in at least two ways. Credit cycles start with the monetary authorities. When the money supply is inflated and interest rates lowered artificially, naturally unprofitable projects appear profitable, and the structure of production is overdrawn. As a credit cycle ends, the unprofitability of many of these businesses becomes apparent as they systematically fail to meet their projected performance. This often results in mass liquidations and recession. Consequently, investors grow concerned about volatility, and gold frequently rises in value. Additionally, inflation can often occur after this volatility logic unfolds. In overdrawing production, monetary authorities artificially increase the money supply. When production is liquidated, the money supply stays constant, and prices may rise. As our readers know, gold tends to preserve capital quite well against price inflation.

Looking back on 2020, it seems as though the relationship between gold and credit cycles holds between gold mining stocks and credit cycles as well. 2020 was a remarkable year for gold mining stocks. The BGMI more than doubled from a low just under 400 to a recent high well above 1,000. If we look at the history of the sector's bull markets, borrowing from one of our most popular charts, we find that a parabolic run is common towards the end of a bull market.

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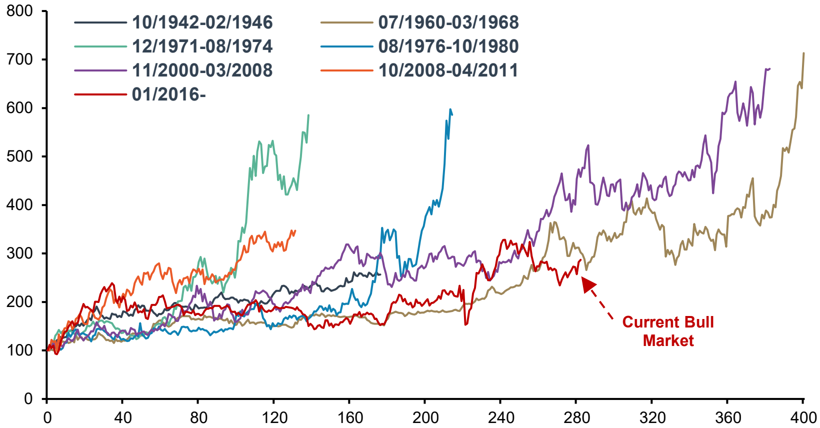
149 *See* Gundlach, Jeffrey: Tweet, Twitter, February 18, 2021

BGMI Bull Markets, 100 = Start of Bull Market Cycle, 01/1942-05/2021



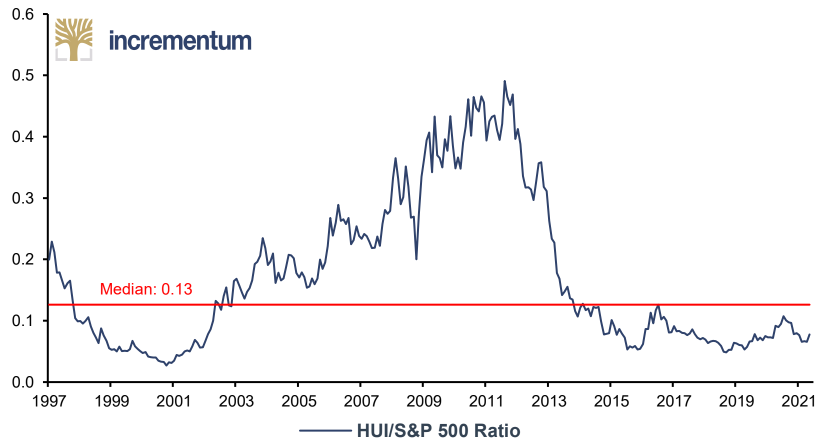
Source: Nowandfutures, TheDailyGold.com, Barrons, Nick Laird, goldchartsrus.com, Incrementum AG

While the sector has witnessed modest momentum since 2016, it is likely still greatly undervalued. At the tail end of global credit cycles, gold mining stocks tend to experience rapid multiplications.

Don't predict, prepare.
Dan Ferris

Examining the HUI-to-S&P 500 ratio, we find that it is still floating around the value of its 2011–2015 bear market. Presently at 0.077, the ratio is well below its 1997–2021 median of 0.13. Conditional on a median reversal, the mining stocks have an upside potential of about 80%. **If the new inflationary paradigm becomes more widespread in the next few years, which we expect, mining stocks will benefit and are likely to trade at even higher levels than the long-term median of the ratio.**

HUI/S&P 500 Ratio, 01/1997-05/2021



Source: Reuters Eikon, Incrementum AG

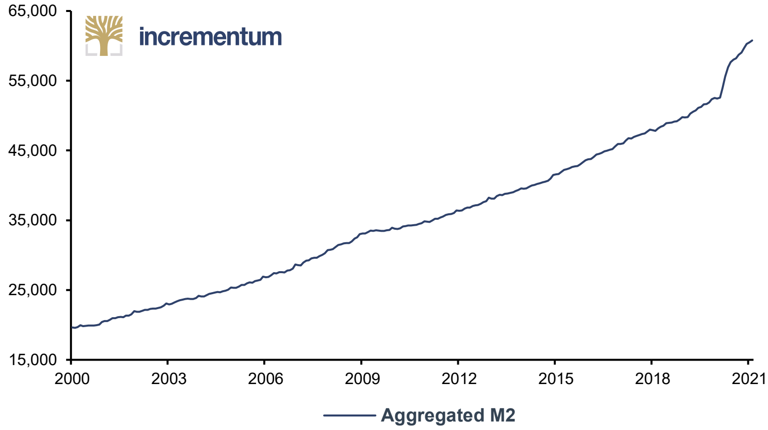
Real Interest Rate Forecast

As 'Austrian' business cycle theory has pointed out, any bank credit inflation sets up conditions for boom-and-bust; there is no need for prices actually to rise.
Murray Rothbard

Besides its unique relationship with credit cycles, the gold mining industry is also uniquely tied to real interest rate dynamics. Before explaining precisely how the two function together, we must establish a real interest rate forecast. In fall 2020, we released a *In Gold We Trust* special called "The Boy Who Cried Wolf – Inflationary Decade Ahead?".[150] The report makes a compelling case for a new inflationary global paradigm. One macroeconomic consequence of this new paradigm are declining real interest rates. The report details some of the primary reasons inflation rates could rise, causing real interest rates to drop. Below we recount some of the report's supporting reasoning:

First, Western economies saw an exorbitant spike in their broad money supplies during 2020.

Aggregated M2 of USA, UK, Japan, and Euro Area, in USD bn, 01/2002-02/2021



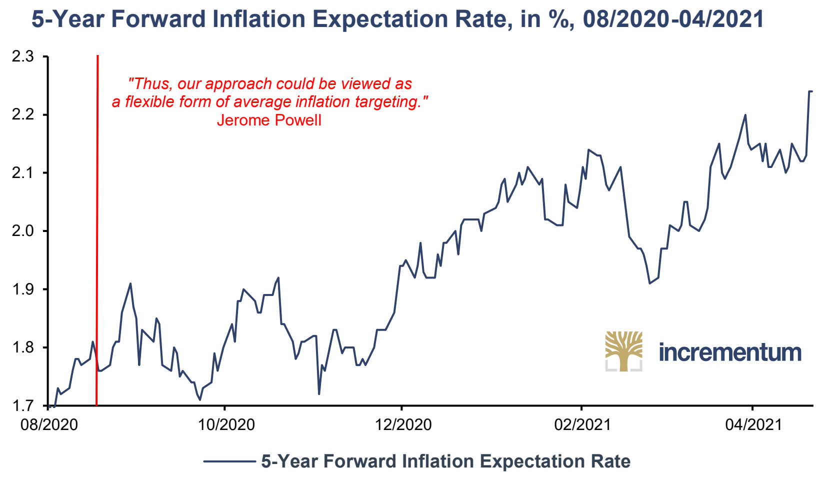
Source: Reuters Eikon, Incrementum AG

Similarly to the previous decade, asset price (re-)inflation was an immediate effect of this tsunami of liquidity. Price inflation will follow in the medium term, once the velocity of money starts to increase.

Our approach could be viewed as a flexible form of average inflation targeting.
Jerome Powell, 2020 Jackson Hole Speech

Second, the Federal Reserve has abandoned its inflation-targeting policy for an inflation-averaging policy. This policy maneuver provides the monetary authorities an ample inflation allowance, well above 2%, in the coming decade. Since the formal announcement of this policy change at the Jackson Hole Symposium on August 27th, 2020, the 5-year expected inflation rate has drifted up by 31 basis points. This suggests markets are already pricing in higher inflation in the coming years.

[150] *See* "The Boy Who Cried Wolf – An Inflationary Decade Ahead?", *In Gold We Trust* special, November 30, 2020



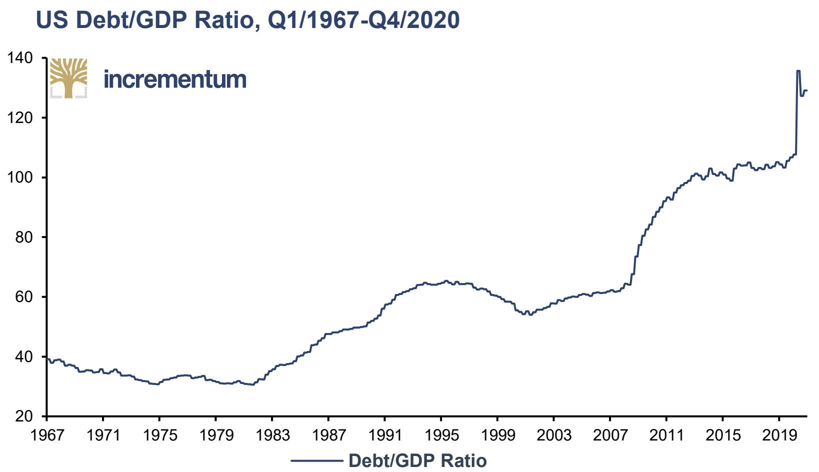
Source: Federal Reserve St. Louis, Incrementum AG

This discovery of the 'magic money tree' allows governments to push funds to smaller businesses and households. This, ultimately, will be seen as the route to fund all sorts of politically necessary ventures including green initiatives, because guarantees cost governments nothing beyond a contingent liability, should the assets turn bad.
Russell Napier

Third, many have reconsidered globalization's central doctrines. Politically, this trend is most evident in the rise of the populist movement in the West, most clearly expressed in the election of former US president Donald Trump. The shift in collective thought could result in mass preferences for local supply chains over global supply chains and real assets over financial assets. This would at least weaken the disinflationary effect of globalization, if not promote inflation.

Fourth, Western economies have entered a period of financial repression. Since the advent of the pandemic, exorbitant amounts of capital have been steered by fiscal policymakers towards guaranteed loans. Our friend Russell Napier emphasized that this structural shift in the power to create money to governments from central banks also marks a new politicization of credit and the end of financial engineering.[151]

Fifth, global indebtedness reached an unprecedented level… and then continued to grow. By the end of 2020, the US had a debt-to-GDP ratio of approximately 136%.



Source: Reuters Eikon, IMF, Incrementum AG

[151] *See* chapter "Yield Curve Control, the Biggest Mistake of the ECB So Far! – Exclusive Interview with Russell Napier" in this *In Gold We Trust* report.

The world's policymakers are now, more than ever, incentivized to continue increasing the money supply to lower the real interest due on public debt. As our world transitions from one with a disinflationary, globalizing background to one with an inflationary, regionalizing background, it will likely witness declining real interest rates.

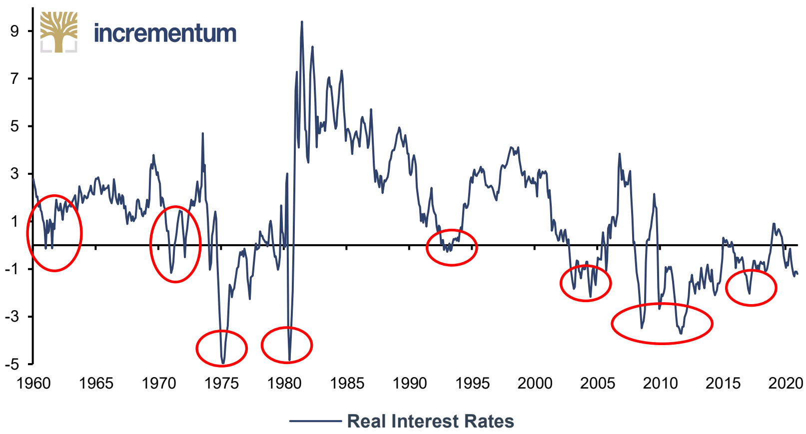
Mining Stocks During Periods of Declining Real Interest Rates

A system of capitalism presumes sound money, not fiat money manipulated by a central bank. Capitalism cherishes voluntary contracts and interest rates that are determined by savings, not credit creation by a central bank.
Ron Paul

Given the likelihood of declining real interest rates over the next 3-5 years, it is worth considering the dynamics between real interest rate developments and the gold mining sector's performance. We analyzed the historical data to establish a quantitative understanding of their relationship. The data is taken from the period stretching from 1960 through 2020. It contains ten historic periods of declining real interest rates, calculated by subtracting the monthly percent change in the CPI from the average monthly effective Fed funds rate. **Each of these periods has two key characteristics:**

- **Greatest average monthly decline in real interest rates for periods greater than 20 months**
- **Begin within a month before or after a recession lasting greater than four quarters or during a period of expansionary monetary policy.**

Real Interest Rates, in %, 01/1960-12/2020



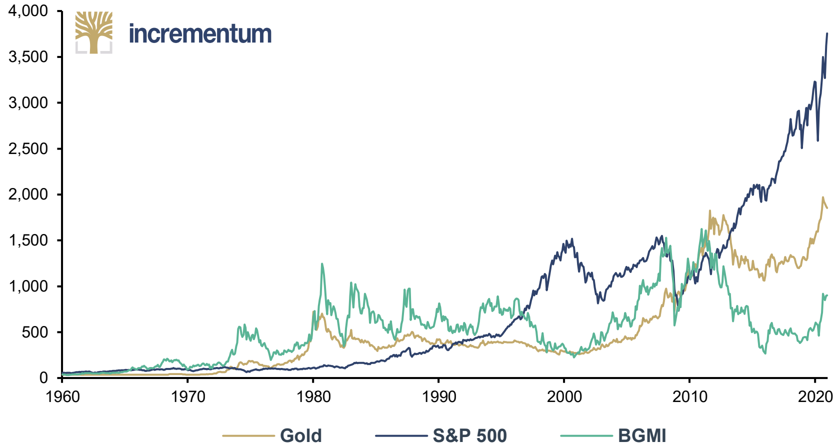
Source: Reuters Eikon, Incrementum AG

The historical periods of declining real interest rates are:
- 1960 recession (01/1960–03/1961)
- Onset of stagflation (07/1969–01/1971)
- Depth of stagflation (06/1973–02/1975)
- Tail of stagflation, Volcker shock (10/1978–06/1980)
- Reaganomics takes hold (08/1984–11/1987)
- The "stubborn recession" (03/1989–05/1993)
- Dot.com bubble bursts (12/2000–02/2003)
- Onset of the Great Financial Crisis (10/2006–07/2008)
- Great Financial Crisis (08/2009–09/2011)
- Covid-19 pandemic (03/2020–present)

Confidence in central bankers' ability to learn from past inflation is as likely to be misplaced as it was in their ability to learn from past credit booms. Gold remains the cleanest insurance against such overconfidence.
Dylan Grice

Each period occurs during a phase of one of the credit cycle corrections of the past sixty years. Our analysis reveals that the sensitivity between gold and gold mining stocks during periods of declining real interest rates increases significantly.[152] That is, gold and gold mining stocks are more highly correlated during these times. We found that gold and mining stocks were 66% correlated during the entire period studied, while they were 92% correlated during periods of declining real interest rates. The increased sensitivity between these assets signals that the market understands them both as safe havens against inflation. **An investor could use both, as opposed to just gold, as a hedge against the risk of inflation.**

Gold, in USD, S&P 500, and BGMI, 01/1960-12/2020



Source: Reuters Eikon, Nick Laird, goldchartsrus.com, Incrementum AG

The overall monthly performance of the S&P 500 was approximately 0.6% during the period of investigation. The BGMI and gold experienced 0.4% and 0.6% monthly returns, respectively.[153] However, during periods of declining real interest rates, the average monthly returns on gold, the BGMI, and the S&P 500 were 0.9%, 0.8%, and 0.5%, respectively. **This certainly confirms that portfolio exposure to gold – in one form or another – has a substantial positive impact during periods of declining real interest rates.**

How Does Our Forecast Impact Your Portfolio?

Financial insurance is cheapest when you need it the most.
Diego Parrilla

It now makes sense to think about the potential upside of gold mining stocks in the context of your portfolio. A long-term comparison between the two indices shows that the S&P 500 outperforms the BGMI in conditions of lower volatility. However, the tradeoff between the two indices – particularly in the context of one's portfolio – is more nuanced. This is especially the case in light of real interest rate dynamics.

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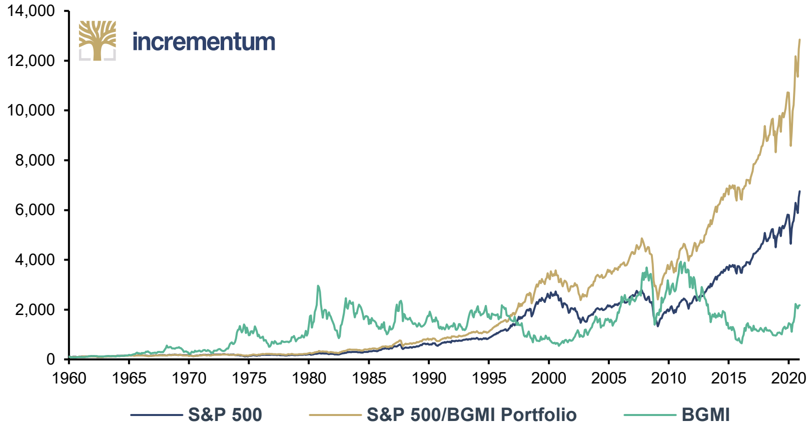
[152] To determine by how much the price sensitivity between gold and mining stocks increased during periods of declining real interest rates, we compared their correlation during periods of declining real interest rates with their correlation during the overall period studied.
[153] In this context, returns are the continuously compounded returns on the security calculated by the logarithm of the ratio of the price of the instrument at each successive month.

Men, it has been well said, think in herds; it will be seen that they go mad in herds, while they only recover their senses slowly, one by one.
Charles MacKay

First, we found that the right rebalancing strategy outperforms the S&P 500 over the sixty years investigated. A strategy that allocates 81% to the S&P 500 and 19% to BGMI during periods of declining real interest rates outperforms the S&P 500 alone and with less volatility.[154] This strategy was calculated by optimizing a portfolio consisting of both the BGMI and the S&P 500 during periods of declining real interest rates. This entails holding the return several basis points above the S&P 500 and minimizing the volatility of the portfolio based on its appropriations. This strategy is not simply a calendar rebalancing schedule, though. Rather, the idea is to rebalance in case of declining real interest rates.

S&P 500/BGMI Portfolio, S&P 500, and BGMI, 100 = 01/1960, 01/1960-12/2020

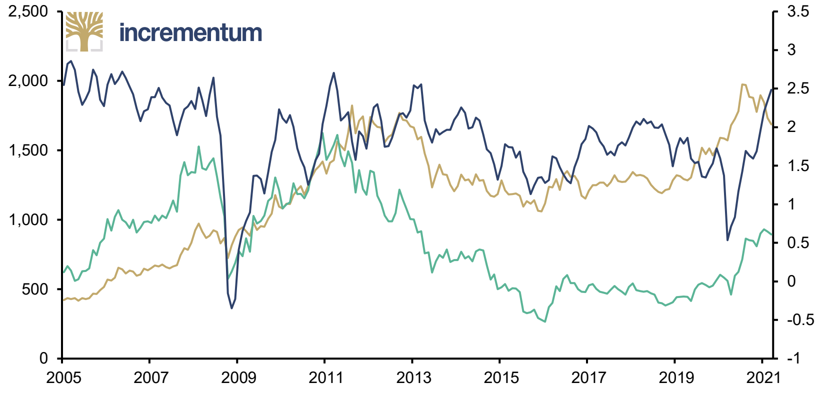


Source: Nick Laird, goldchartsrus.com, Incrementum AG

One way to determine whether real interest rates may decline is through inflation expectation rates. As mentioned above, the correlation between physical gold and gold mining stocks increases substantially as inflation expectations rise. We found that during these periods, gold mining stocks substitute more effectively as physical gold in a portfolio. As we have written about in previous *In Gold We Trust* reports, gold is an attractive asset insofar as it hedges against wider market downturns, volatility, and rising inflation.[155] **During periods of rising inflation expectations, we found that the BGMI had an average monthly return of 1.8% in contrast to gold's 1.4%. Note that this period was limited to 18 years, as TIPS were only introduced in the early 2000s. However, as is to be expected, this outperformance must be weighed against the BGMI's annualized volatility of 34.3% compared to gold's 13.2%.**

[154] *See* also: "Heads or Tails You Lose", Daniel Oliver, Myrmikan Research, October 11, 2018
[155] *See* "Portfolio Characteristics: Gold as Equity Diversifier in Recessions"; *In Gold We Trust* report 2019, "The Portfolio Characteristics of Gold", *In Gold We Trust* report 2017

Gold, in USD, and BGMI (lhs), and US 5-Year Breakeven Rate (rhs), in %, 01/2005-03/2021



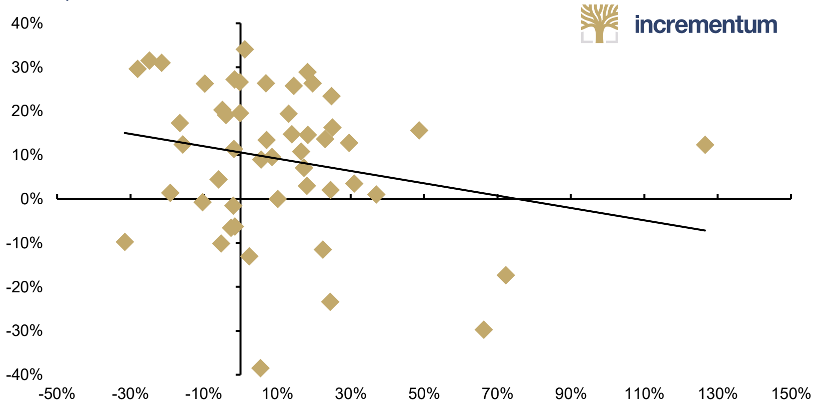
Source: Reuters Eikon, Incrementum AG

Some people get rich studying artificial intelligence. Me, I make money studying natural stupidity.
Carl Icahn

Finally, it is worth noting that gold mining stocks even function as a hedge against wider bear markets. Across nine bear markets and crashes in equities examined, mining stocks had an average monthly return just under -0.7%, while the S&P 500 witnessed average monthly declines of 5.7%.[156] This is quite surprising considering that mining stocks are carrying equity risk.

However, gold mining stocks are not a replacement in toto for the yellow metal itself. During the bear markets analyzed, gold still outperformed mining stocks, with less volatility. In the instance of bear markets in equities, gold still proved to be the best safe haven.

Annual Return Distribution of Gold (x-axis), and S&P 500 (y-axis), in %, 1970-2020



Source: Teacher Retirement System of Texas, Bloomberg, Incrementum AG

The chart above shows that the distribution of returns to physical gold and the S&P 500 are inversely related. One insight contained in the chart is that physical gold hedges against risks perceived in equities. The chart also has implications for the tradeoff between physical gold and gold mining stocks. Physical gold holds none of the equity risk carried by the BGMI. During the same bear markets, gold witnessed an average monthly return of 1.4%. Considering the widespread turbulence of these periods – the S&P 500 and BGMI

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156 The nine periods investigated are: 02/1962–10/1962, 10/1969–06/1970, 10/1973–09/1974, 08/1987–11/1987, 06/1990–10/1990, 08/2000–03/2001, 03/2002–02/2003, 10/2007–02/2009, and 01/2010–03/2011

experienced an average monthly volatility of 5.2% and 11.9%, respectively – physical gold serves not only as an excellent hedge against inflation and bear markets, but it can also protect wealth against volatility.

Circling back to the HUI, it makes sense to consider a price target for the index in the coming years, starting from the fact that the HUI-to-S&P 500 ratio is still 80% below its historical median. As a component of our analysis, we determined the differential between the average monthly return of the HUI, 0.2%, and its monthly return during periods of declining real interest rates, 2.4%. This is a magnitudinal increase in the upside of the HUI's performance based on real interest rate dynamics alone. The gains could be even greater when factoring in the possibility of a reversal of the present "anti-bubble" in gold.

But investing isn't about beating others at their game. It's about controlling yourself at your own game.
Benjamin Graham

It makes sense to conclude our portfolio considerations with a note on timing. As mentioned, the proper rebalancing strategy will not be determined by any pre-ordained calendar schedule. However, there is a distinct pattern to understand when considering a mining stock rebalance. The early months of declining real interest rates are accompanied by a wider equity bear market or equities crash. As detailed, this drags down the performance of gold mining stocks and increases their volatility. This pattern creates something of a trade-off between gold and gold mining stocks during periods of declining real interest rates. Investors should include mining stocks in their portfolio after the "dust settles" and confidence in the equities market is partially restored but prices have not fully recovered.

Conclusion

If inflation-adjusted interest rates decline in a given country, its currency is likely to decline.
Ray Dalio

Our analysis was motivated by our conviction that real interest rates will further decline in the coming 3–5 years. What kinds of investments will flourish during such a period? As students of history, we are inclined to suspect successful investments will be those exposed to gold and real assets in general. However, we decided to precisely quantify these dynamics.

Our main findings are:

- During periods of declining real interest rates, gold mining stocks behave more like physical gold. During the overall time studied, gold and mining stocks experienced a 66% correlation, compared to a 92% correlation during periods of declining real interest rates.
- Mining stocks remain exceptionally undervalued despite their performance in 2020. This much is revealed by the HUI-to-S&P 500 ratio's current value of 0.075, well below its median value of 0.135.
- The right mining stock rebalancing strategy beats traditional portfolios during times of declining real interest rates. A portfolio which rebalances at the end of credit cycles to 81% S&P 500 and 19% BGMI outperforms the S&P 500 with lower volatility.

- Physical gold remains an important feature of one's portfolio, as it outperforms the S&P 500 significantly while achieving similar returns to gold mining stocks during equities bear markets.

Courtesy of Hedgeye

We turn to the wise words of Thomas Hobbes to reassert the fundamental and robust value of gold and gold assets in the face of an economic reckoning:

> *"Because silver and gold have their value from the matter itself, they have first this privilege, that the value of them cannot be altered by the power of one, nor of a few commonwealths, as being a common measure of the commodities of all places. But base money may easily be enhanced or abased."*[157]

[157] *See* Hobbes, Thomas: *Leviathan*, 1651

Yield Curve Control, the Biggest Mistake of the ECB So Far! Exclusive Interview with Russell Napier

"Everything has changed on a permanent basis. I don't believe that inflation goes up and comes back down again, because these are permanent changes in the very structure of how the system works."

Russell Napier

Key Takeaways

- Governments have effectively taken control of the commercial banking system. The system will increasingly lend on demand to what the government wants it to lend to.
- Broad money growth will be much higher than it has been in the age of disinflation with deflationary episodes.
- Inflation will be global. Every developed-world market has seen very high levels of broad money growth, without exception.
- One of the biggest wealth traps ever, buying Chinese government bonds.
- The first rule of financial repression is "get your money out of the country".
- The European Central Bank's decision to introduce yield curve control will go down in history as one of Europe's greatest mistakes.

Professor Russell Napier is author of *The Solid Ground* investment report for institutional investors and co-founder of the investment research portal ERIC, a business he now co-owns with D.C. Thomson. Russell has worked in the investment business for over 30 years and has been advising global institutional investors on asset allocation since 1995. Russell is author of the book *Anatomy of The Bear: Lessons From Wall Street's Four Great Bottoms* ('a cult classic', according to the FT) and is founder and course director of "The Practical History of Financial Markets" at the Edinburgh Business School.

Ronnie Stoeferle and Nikolaus Jilch conducted this interview with Russell Napier by Zoom March 11, 2021.[158] We publish the highlights of the interview here. **The full version is available for download at the following website:**

https://ingoldwetrust.report/igwt/exclusive-interview-with-russell-napier/?lang=en

Source: Youtube

Ronnie Stoeferle (RS): It is a great, great pleasure to have Russell Napier here. Thank you very much, Russell, for taking the time.

Russell Napier (RN): Thanks, Ronnie, delighted to be here.

RS: And also, my dear friend Nikolaus Jilch is here. Nikolaus is a researcher at Agenda Austria, a free-market think tank based in Vienna, and also a contributor to the *In Gold We Trust* report. Hi, Niko!

Nikolaus Jilch (NJ): Hello. Nice to be here. Thank you for having me.

RS: We will talk about topics that we've got in mind at the moment. I told you before that, actually, it seems that we're not alone anymore in the inflation camp. We will talk about financial repression we will talk, of course, a bit about gold. Niko, do you want to start?

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[158] The video of the entire interview "Yield Curve Control, the Biggest Mistake of the ECB So Far!" can be found on YouTube here.

You have been a deflationist for decades, and you changed your point of view in the last couple of months.

NJ: Yes, thank you. The main topic – not just for this talk, but I guess for the whole year – is the question of inflation. **You [Russell] have been a deflationist for decades, and you changed your point of view in the last couple of months**. Could you walk us through your thinking? Because I think that's the main point of our discussion.

RN: Yeah, I think decades is right! Actually, I've got… just over to my right here, I've got framed a report I wrote in 1998, called "Dealing with the 'D word'", and the "D word" was *deflation*. That was 22 years ago. And, basically, in any economic contraction we've had since 1998, the "D word" has come up, including in the most recent episode; but it's now come up several times.

You've got to remember that this is exceptional, because my entire career before that had to do with inflation. And really, between 1958 until 1998, there were no brushes with deflation whatsoever, and I was told by various academics that it was impossible to have deflation. And I say that with a straight face! It was impossible to have deflation because central bankers would always be able to beat it. And we've had it anyway (admittedly briefly).

Why on earth have I changed my mind on inflation? It is to do with who creates money, how much money they create, and whose hands that money is in.

So after all this time, why on earth have I changed my mind on inflation, which I did last March or April? Crucially, it is because of a change in the structure of finance. So it's nothing to do with a change in the business cycle, or the levels of stimulus, or any of that. **It is to do with who creates money, how much money they create, and whose hands that money is in.**

So for me, **the crucial structural change here is that the governments are providing credit guarantees to the commercial banking system**. In the era of quantitative easing, commercial bank credit growth was very low. What everybody who's watching this needs to know is that most money in the world is created by commercial banks, and they really didn't lend. Interest rates were too low; regulations were too high; people didn't want to borrow; and, basically, the commercial banking system just simply couldn't expand and create money. And then we offered the credit guarantees from the government. **And now we have, across the world, bank credit growing really strongly in a recession, which is absolutely unheard of.**

The governments have effectively, through the powers of regulation, taken control of the commercial banking system.

If we follow the example of the British government, for instance, in the budget of last week, they have now announced credit guarantees on mortgages. That's got nothing to do with an emergency Covid-19 response. In my opinion this is the "new normal".

The governments have effectively, through the powers of regulation, taken control of the commercial banking system. The commercial banking system will lend on demand, effectively, to what the government wants it to lend to. Therefore, broad money growth will be much higher than it has been in the age of disinflation, with deflationary episodes. And it's that structural change that really confirms the likelihood of high money growth and higher inflation, for a very prolonged period of time. So something changed structurally. And that's why I changed my mind.

NJ: The main storyline right now is that we will see a brief pickup of inflation, and then see it go away again. Is that not what you believe?

RN: No, it really does depend. There's one way I could buy into that. I could buy into that if what we witness is a pulse of bank credit going out in the emergency; and then it stops and bank credit rolls over, and with it money supply growth rolls over. But the authorities have learned their lesson from the last time, and they aren't going to let that happen. And whatever it takes to get the banks to extend credit will be done. I look at the mandate, the change in remit that the Chancellor of the Exchequer handed to the Bank of England last week. The Bank of England has to support the Long-Term Asset Fund, the housing market, the "levelling up" agenda, the green agenda.

Now, when you give a central bank… and the central bank has a role to play in commercial banking… when you give it all these political targets, they are not compatible with the inflation target. **So it's not just that we've changed the mechanism through which commercial banks lend, we've changed the policy target of the central banks**. **And it would be virtually impossible today, given the target and the remit, to say that inflation is still the dominant target for them.**

It's not just that we've changed the mechanism through which commercial banks lend, we've changed the policy target of the central banks. And it would be virtually impossible today, given the target and the remit, to say that inflation is still the dominant target for them.

Everything has changed on a permanent basis. So I don't believe that inflation goes up and comes back down again, because **these are permanent changes in the very structure of how the system works**. And I'm sure we'll come on to talk about yield curve control. But that is another one. You know, that's the third one that we're running into. Structural changes, not cyclical changes. Therefore, structural changes are sustainable, and you don't get a cyclical uptick in inflation, you get a structural uptick in inflation.

RS: But Russell, what would you say about those additional topics like MMT? It used to be something for left-wing economists sitting in their ivory towers. Now, it is really something that is going mainstream. Topics like average inflation targeting, topics like the demographic change. Then, of course, I think it is really fascinating to follow the exchange value of the US dollar versus the renminbi. We saw enormous strength in the renminbi since the end of May, which also, from my point of view, is some sort of inflationary driver. So, you know, those other topics, do you think they just add to your main case, or should we analyze them separately?

RN: No, I think they add to the main case. What I think is really interesting about all of those that you mentioned is they're all structural. Again, this is the crucial thing.

What very rarely happens is that the revolution of the mind catches up with the revolution in money-making.

You know, you can sometimes go a whole career and just be guessing the business cycle. And that's a game you can play, and you can play it profitably. And then sometimes you have to live through a structural change. As you say, the legitimization of MMT, the politicization of central banks, credit guarantees… I mean, it just comes in an absolute flood. And this is clearly a very big structural change. And when you get one of those, most people are entirely unprepared for what happens next. Because, remember, people who are successful in our business, have been people who have played a disinflationary trend for 40 years. And they've played a system which was a market-oriented system, and not an inflationary, less market-oriented system; and the skill set for that probably needs to be entirely different. **What very rarely happens is that the revolution of the mind catches up with the revolution in money-making.**

Most people in the markets are stuck in that. Now, you might say, "Well, I'm one of them, because it's been my career as well", but one of the advantages, perhaps, I have is an understanding of financial history; and I think this period we're moving into and all of the things you've mentioned here, is like the 1945 to 1978 setting.

So we can go back into that period and look at the consequences for investors of these sorts of policies. There's now a very different structure of a market from before, but what I thought was particularly interesting about everything you said there is it represents a change in the zeitgeist. Savers have done too well; debtors are overburdened; money has to be moved from one to the other; and there's very little in the political circles or central banking circles that will push back against that.

The zeitgeist is simple: It's the savers who've got all the money. The money has to come from the savers. Now, you can do it directly through taxation, or you can do it through that other form of taxation known as inflation.

So the zeitgeist has changed. That's why the structure changed, and everything you mention is good evidence of that.

NJ: So are you basically saying we're going to see a replay of the 1920s, where first everything feels good, everybody thinks they're getting richer, but they aren't?

There were massive technological breakthroughs after World War 1 in terms of electrification, the internal combustion engine; all of these things were desperately, desperately deflationary.

RN: I don't think it'll be along those lines, or it depends where you are in the 1920s! Obviously, it matters whether you were in Germany or in America in the 1920s. I mean, that's a good example, isn't it? America had deflation, price stability… but actually in many goods it had deflation… and Germany had hyperinflation. What was the difference between the two? It was primarily the rate of money supply growth.

There were massive technological breakthroughs after World War 1 in terms of electrification, the internal combustion engine; all of these things were desperately, desperately deflationary. The death of the horse was very deflationary; it freed up lots of agricultural land, which went into production of food for people. But if you lived in Germany, or Austria, in that time, monetary policy was able to more than offset this.

I think it highly unlikely that we go to hyperinflation in this setup; I think it's likely we go to reasonable levels of inflation. But **the crucial thing is that interest rates would not be allowed to reset to reflect that inflation**. I think that's the most important thing for savers.

We're going to suspend the free market in government debt; and that, ultimately, will be the most important thing for investors during this period.

So, depending on which 1920s you think we're in... I don't think it's the German or Austrian or Hungarian 1920s. Nor do I think it's the American 1920s, because **we are going to suspend the free market in government debt; and that, ultimately, will be the most important thing for investors during this period**.

NJ: So, basically, you're saying that the inflation will be global?

RN: Yes, I think inflation will be global. I mean, every developed-world market has got really high levels of broad money growth, without exception. And when I say "really high", I mean triple the rates of a year and a half ago; and if we aggregate them, we're looking at the fastest growth in broad money globally since 1988. And if we go all the way back to 1980, there would have been six months when it was growing faster than this. So it's very clearly a global phenomenon in the developed world, but not necessarily in the emerging world. But the point is, **if the developed world creates that much money and inflation, it is really very difficult for the emerging markets to remain immune to higher inflation.**

If the developed world creates that much money and inflation, it is really very difficult for the emerging markets to remain immune to higher inflation.

NJ: But you did mention the technical breakthroughs 100 years ago after World War 1. And there is no shortage of technical breakthroughs now. There is technology, and technology is still deflationary. Will that have an effect?

RN: Well, that's kind of why I mentioned Germany in 1923, because Germany also benefitted from massive technological breakthroughs; but somehow, just by the power of the printing press, they negated those. **I would say the real acceleration and deflationary forces began in 1995.** And the world begins to change in 1995. Interestingly, that's when US equity valuations seem to move to a permanently higher level.

Two things happened in 1995. **China had devalued its exchange rate in 1994**, and it was now selling at much cheaper prices and, obviously, mobilizing hundreds of millions of people to get productive. And also, **Jeff Bezos sold his first book in 1995**. So where is the birth of the technological revolution? Well, you know, it's always been with us, but maybe it accelerates in 1995.

I would say the real acceleration and deflationary forces began in 1995.

I looked this up last night. What has happened to the price level in America since 1995? It's risen 75%. I think we all recognize the scale of the deflationary forces that have been ripping through the world since 1995. And yet prices are 75% higher, based on the CPI, than they were in 1995. Now, that's actually not a lot over all of that period. But it's still a 75% increase.

So somehow, in the teeth of the biggest technological acceleration the world has ever seen, and in the teeth of the biggest mobilization of underutilized labor the world has ever seen (certainly, at least, since we opened up America)... **in the teeth of both those things, we push prices up 75%.** So there's something else going on in the world of prices, rather than just technology, and just China. So it can be done. It has been done. And it will be done again.

RS: Russell, you worked in Asia for many, many years at CLSA. And I think when we had a chat you said that another driver for our inflation topic would be a proper cold war between China and the US. I think this is perfectly playing out. It seems that it is not getting better now with Joe Biden sitting in the White House. How strong is this effect of China becoming more and more of a real competitor to the US when it comes to technological things? Military? And of course, especially the economy?

RN: I think it's very powerful. I mean, the last question was about technology, and I brought China into it because I think it's been both that have given us this prolonged period of inflation and deflation.

What Trump could do was attack China, but what he couldn't do was to contain China. You need a coalition. And that coalition has to include Europe. And Trump was unable to build coalitions, even with his wife, I think we could say safely! I mean, he's not very good at building coalitions.

The Biden administration, whether it builds a coalition or not, has a much better prospect of building a coalition to contain China. And that containment must be about containing its external accounts, containing its ability to export.

The Biden administration, whether it builds a coalition or not, has a much better prospect of building a coalition to contain China.

I don't see any move back from this cold war that we're going into. Obviously, as a citizen of the world, I hope that's wrong and that we don't. But that was massively deflationary. I mean, I looked just a few weeks ago, and I think it's true to say that the price of Chinese exports hasn't really changed in nearly 30 years. It's astounding, I mean, look back at a period of history; you basically have to go back to the gold standard to find a period where a major exporting country didn't get any rise in prices. And you can look at the price of Japanese exports, or Taiwanese exports or Korean exports, and you tend to get the same thing. And that was all to do with China. So I don't have any doubt that as we contain China, and that will focus on its exports as well, the major deflationary force that was China will begin to move into the background. And that's even true if they have to let their currency float (which I think they probably will). It would initially go down, but it would just attract even more tariffs, and even more protectionism of China if the Chinese exchange rate went down.

So this cold war is very, very inflationary, not just because we seal off that production, but it starts an investment boom, on an unparalleled scale, because **the other side in the cold war has to begin to build all this capacity that China is not providing to the world anymore**. So it is very inflationary. I always begin with the proposition that inflation is everywhere, at all times, a monetary phenomenon; but I'm very happy to discuss real effects as well. And this China ostracization is clearly one of these real effects.

I think it's one of the biggest wealth traps ever, buying Chinese government bonds.

RS: Isn't it a bit ironic that now the People's Bank of China is running some sort of a conservative monetary policy, and you kind of get positive real yields there? I hear from many investors nowadays that they're really considering buying into the Chinese bond market. It seems that they now seem to be letting companies go bust, so it seems that to some degree, they're even a bit more market-oriented than we are in the Western world.

RN: I think it's one of the biggest wealth traps ever, buying Chinese government bonds. There are two reasons for that. One is that, in a cold war it would be illegal (just to point that out). I mean, lending money to the Chinese government to build aircraft carriers would not be legal in a cold war. And of course, that's slightly hypocritical, given how much money the government of China lends to America to build aircraft carriers.

But there's a much bigger issue as to why I think it's a wealth trap to put money into Chinese government bonds. China's debt-to-GDP ratio was just as bad as America's. It isn't this wonderfully ungeared economy. It used to be before the GFC . But it had, **prior to the Covid-19 crisis, the fastest-rising debt-to-GDP ratio ever seen in history in a major economy**. If we look at its debt-service ratio, which takes into account interest rates, as the debt-service ratio of the private sector, it's got one of the highest in the world.

You don't want to own bonds in a country that has to inflate away its debts.

I'm not singling China out. The entire developed world has to inflate away its debts, and the only emerging market that has to do the same as China. **You don't want to own bonds in a country that has to inflate away its debts.** Now, it's currently constrained on that, because it's managing the exchange rate, and that does constrain how much money you can create. And Chinese broad money growth is only at 10.1%, slightly above Japan, below Europe, half of America but they'll have to change that. They're currently in a debt trap, and to get out of the debt trap, they will also have to inflate away their debt. So to buy government bonds, you clearly don't believe that the government will ever come and inflate away your debts. But it seems as likely in China as it is in Europe as it is in the United Kingdom, as it is in the United States. **So I strongly, strongly recommend people not to invest in Chinese government bonds.**

NJ: When you talk about inflating away the debt globally, what does this look like? What does this mean for financial markets and for the everyday lives of people?

RN: So, this will surprise you to hear that actually, for everyday people, it's pretty good. For savers, it isn't. So let me explain.

I would argue strongly, that's what the European Central Bank has announced today. It has said in roundabout terms that it's going to be capping the yield curve.

There are two things you have to do to pull this off: You have to create a high level of inflation and a low level of interest rates simultaneously. And anybody who's watching this, who has been to business school, will tell you that's impossible. Because in a free market we would all demand a very high level of nominal rates to compensate us for existing inflation and expected inflation. So the only way you can actually pull that off is to suspend the free market in interest rates. And, **I would argue strongly, that's what the European Central Bank has announced today. It has said in roundabout terms that it's going to be capping the yield curve.**

There was a speech, a more accurate speech, by Fabio Panetta of the ECB board last week basically saying "No, no, it's even better than that we're going to anchor nominal yields, and we're going to drive inflation above that." That's exactly how you would inflate away debt.

Just let me give you some historical examples. By the end of World War 2, both France and the United Kingdom had very similar levels of government debt to GDP at about 280%. By 1980, the United Kingdom took it from 280% to 50% of GDP. And it has done that by, pretty constantly, keeping inflation slightly higher than interest rates. But it took a long time because there wasn't a big gap, until the 1970s.

France achieved exactly the same thing in five years. And the way France achieved it in five years was that interest rates were about 5% while inflation was 50%. Now, in that environment you can wipe out your government debt very quickly, indeed. I don't think anybody will contemplate that I think the dislocation and destruction of wealth will be too great.

It doesn't surprise me to know that the biggest advocate of inflating away debt is French; he's called Piketty.

So you take your pick; is it going to be the French approach or the British approach? Either way, the only way you do it is to keep inflation above bond yields; and if it's just a small gap that goes on for decades, and if you're prepared to live with a very big gap that goes on for much shorter period of time.

It does not surprise me to know that the biggest advocate of inflating away debt is French; he's called Piketty. So I don't know if that's a coincidence or not. But France historically has been quicker to grasp the part and inflate away its debts. And it's fascinating, because it's given away that part (technically) to the European Central Bank. But the European Central Bank is of course run by an ex-French finance minister so this could come in useful.

NJ: Can I pick you up on that? Because the Austrian Mint, where the silver and the gold Philharmonic are minted, is owned by the Central Bank. And the central bank is part of the euro system. The euro system has 12,000 tons of gold. So what do you think is the role of gold within the monetary system right now? Why do they own the gold? What's the plan there? Do you think there is a plan?

RN: No, I don't think there's any plan. I think it's a legacy of where reserves were historically infused. Some people, like the British, sold their gold, but most people just hold it as a legacy. I don't think there's a great deal of planning on this; there certainly would be no plan to go back to a monetary standard or a gold standard. In a democracy that would only happen after a hyperinflation. And that's the only way we're going back to the gold standard. **Democracy, in my opinion, is incompatible with hard money.**

Democracy, in my opinion, is incompatible with hard money.

NJ: But do you think there's a possibility that elements within the central banks realize that they need to open avenues for normal people to run away from inflation in some way?

RN: No, I think exactly the reverse! **I think if you're going to inflate away debt, the most important thing is that there is nowhere for someone to hide, that there is no way to run away.** And you certainly don't want to open an official channel. I mean, there are places to run away. There are countries that won't do financial repression; you can buy silver, you can buy gold; but the idea of opening an official channel to do it is somewhat unlikely. I mean, I buy gold from the British mint. So there's currently an avenue to do that. That may be restricted in terms of annual production… or something like that. But I think it's a great question, because it raises the issue of crypto and Bitcoin, which nearly everybody who's buying thinks is a way that you can escape financial repression. And the answer is, it can't be, because if it is then everybody will use it, and you can't do financial repression.

So a repression is really about closing all these loopholes and putting fish in a barrel. I mean, if you want to shoot fish in a barrel, you had first better put them in the barrel first, not offer them an escape route. So tightening up all these controls is really the first place you go as a government or as a central banker, rather than opening up more loopholes.

So a repression is really about closing all these loopholes and putting fish in a barrel. I mean, if you want to shoot fish in a barrel, you had first better put them in the barrel first, not offer them an escape route.

RS: I think you once said that **financial repression is "the art of stealing money from old people slowly".** We already have quite a lot of financial repression. As an asset manager, it is for us, in the UCITS fund it's basically impossible to hold physical gold, but it's perfectly fine to buy Portuguese or Greek debt at negative yields. But gold is obviously too risky in the eyes of regulators. However, don't you think that if we see financial repression really much more dramatic than we have now, wouldn't that have to go hand in hand with capital controls?

RN: The answer to that must be "yes". I always give you very long answers, really, but the answer to that must be "yes". We really haven't had a financial repression without it.

NJ: But, to understand correctly, do you not see the broad equity markets as a way to get away from financial repression?

Financial repression is "the art of stealing money from old people slowly".

RN: Yes, components of the equity market, yes, but this is the main problem I have with financial repression. It ultimately involves forcing savings institutions to buy government bonds. You really can't continue to do it using the central bank balance sheet, because you'd be creating too much money. And if I say to… let's pick a German fund… if **I say "you must have 75% of your money in German government debt", well, they have to sell something. And I think what they sell is equities.** It's one of the things they sell, it's not the only thing they sell.

So that will be the first thing if we go to that form of repression, you've got this prolonged sale of equities. Having said that, the beautiful thing about equities is there's so many of them and so many different types of companies. And there are bound to be companies that will benefit from a high inflation, which means high selling prices, particularly if they have high fixed costs, such as depreciation or interest expense. So it would be impossible to dance in and out of the bond market to defend yourself from repression. It might be possible to take positions in the equity market to defend yourself from repression, even though equities generally would be going down. **The first rule of repression is "get your money out of the country."**

The first rule of repression is "get your money out of the country."

RS: We published this report about inflation called *The Boy Who Cried Wolf.*[159] And, I think it's interesting, I had a look at the Bloomberg forecasts for inflation. The most important economists say for 2021 is that they forecast 2.3% for 2022, or 2.2%, and then it should fall slowly to below 2% again. This would be, let's say, the "feel good" area for equities. But at 2.5–3.0% (something in this area), this "feel good" zone ends, and it ends quite abruptly. So **I think it's important also to stress the point that equities, per definition, aren't the best inflation hedge**. It really depends on the sector. There's a great article by Warren Buffett on that topic: "How Inflation Swindles the Equity Investor".[160]

But Russell, if we see rising inflation – and you're not talking about hyperinflation, but I think something around four, five or six percent should be possible from your point of view – a large part of the equity markets won't do so well; bonds will have a hard time… so what's actually left? Besides real estate and perhaps gold?

Would we ever allow the 10-year bond yield to reflect those levels of inflation? That's the important question.

RN: Yeah, I think we need to talk about that in a bit more detail. Normally, growth goes up, inflation goes up, interest rates go up, and equities go up. That's the normal situation.

When you look historically, recently inflation can get to 4% and equities just keep going up, even though bond yields are going up. That's the normal scenario. And obviously, you know, we're quite a long way from that. So that would suggest to just hold equities until we get near that level. But I think – and it's a very big "but"… **and the most important "but", and we've kind of already discussed it – would we ever allow the 10-year bond yield to reflect those levels of inflation? That's the important question.**

Courtesy of Hedgeye

So you pick a number – you just mentioned that some of these analysts are forecasting 3% inflation for two years – where would bond yields be at 3% inflation, even if you think it's going to roll back over to 2%? Surely you're going to be saying that euro bond yields should be at 3% or 4%? **Well, actually, they're going to be 0%.** Because today the central bank just told us they're going to stay at zero. I mean, **they categorically said the yield curve is staying where it is: It ain't going anywhere! Now, that's different. That's not what we expect to happen.**

So back to the previous question. What does that mean? Because this is completely different from anything we've ever seen before. And we've already discussed whether that's positive or negative.

They categorically said the yield curve is staying where it is: It ain't going anywhere! Now, that's different. That's not what we expect to happen.

In terms of where you put your money, though, why don't we just find a country that hasn't or doesn't financially repress? After World War 2, that was Switzerland. For a very good reason, Switzerland ended World War 2 with not very much government debt, for reasons that everybody knows. It didn't have to inflate away its debt, and **one of the simplest things you could have done as an investor in 1945 was put your money in Switzerland and go to the beach for 40 years.** That was kind of all you really had to do. I think the emerging markets – and this is obviously contentious, given that we associate them

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159 *See* "The Boy Who Cried Wolf: Is An Inflationary Decade Ahead?", *In Gold We Trust* special, November 30, 2020
160 *See* Buffett, Warren: "How Inflation Swindles the Equity Investor", *Fortune*, May 1977

historically with more risk – but the emerging markets, excluding China, have a debt-to-GDP ratio of 166%. The developed world is at 300%. France is at 371%. So **I think emerging markets… and gold (which I know you would like to talk about); gold is definitely somewhere to put money in a repression.**

But if you get stuck inside a repression, residential real estate is actually another place where you do quite well. The price of the residential real estate may only rise in line with inflation, so you might think, "Well, I'm not actually protecting myself." But obviously, if you've borrowed heavily, and interest rates don't go up, then you benefit from that. So there are some places where you can cover yourself from this, but a lot of them will be outside the repression regime. If you get stuck inside a repression regime – and I'm using the word *stuck* because we mentioned the phrase *capital controls* – you've got to run very, very hard to stand still as a saver.

I think emerging markets and gold are definitely somewhere to put money in a repression.

RS: But don't you think that investors and people running businesses are always one step ahead of government actions, and that they anticipate future financial repression and capital controls? I mean, that's already happening, probably.

RN: Yeah, you're right. My definition is "stealing money from old people slowly". So the idea is that you do it slowly enough that they don't notice. But at some stage, they notice.

It's a really interesting point. Have they already noticed? Not really; I don't think so. I mean, money is… you probably have a lot of friends that are doing that with their money, but the big institutions aren't.

It's when the big institutions start doing that… I don't think it's really begun yet. So I think that's absolutely right: **You try to do it slowly and at some stage the people work it out.** And what you get then is a collapse in your exchange rate, because they rush out of your exchange rate.

Now, I'm watching the euro trade today. **The European Central Bank has categorically told people it's going to inflate away their debt.** It's a target of the ECB to inflate away debt, and the exchange rate went up. So clearly, markets take a while to work these things out.

The European Central Bank has categorically told people it's going to inflate away their debt. It's a target of the ECB to inflate away debt, and the exchange rate went up. So clearly, markets take a while to work these things out.

RS: We have only briefly touched on the topic of gold, Russell. In summer it was really easy to be a gold bug, but now it seems it's the most hated thing! I'm getting emails and phone calls from many, many people who are a bit worried about the price of gold, obviously, I mean, yields are up since summer. It was a big move, although the absolute level is still fairly low. I think that crypto, or especially Bitcoin, stole a bit of the media attention from gold. But what's your case for gold going forward? I mean, obviously we don't have to talk about price forecasts. But where do you see gold in the portfolio? As you know, from an asset allocation point of view, what would you think for an average investor should be the allocation?

RN: Yeah, so just to prove that I don't just specialize in silver, there's my British sovereign, my little, tiny piece of gold, which can still buy you a dinner at the Savoy, although I'm not the sort of person who goes to the Savoy for dinner!

So, on financial repression. What we had initially is interest rates going up, and the relative yield of gold has been hit. Obviously, gold doesn't have a yield, but its price has been hit.

The crucial thing now is, do we cap interest rates? Because that's when everything changes. If we just stand back, and maybe bond yields go up and up, maybe there's another 100 basis points where gold doesn't do well, because people move out of gold and look for that yield.

But if we cut yields, then everything changes. And obviously, that's what happened today, they recently announced a yield cap. Because now what you're told is it doesn't matter. I mean – this is for European bonds – it doesn't matter what your nominal yield is, you know it's got to be below inflation. So why on earth would you take that nominal yield, which in many cases is still negative?

If we cut yields, then everything changes.

So you have to reconsider, and you have to reconsider gold. And **the reason you reconsider gold is because one of its best relationships is with real rates over the long term.** And the central bank has guaranteed you negative real rates; that's actually their target in the European Union. And then it goes to the second level, which we have discussed throughout this conversation, which is macroprudential regulation: trying to force you to own things you don't want to own. So it's not just that, "Hey, there's negative real yield curve", it's massive control over what you're allowed to own.

And the beauty of owning one of these *[picks up gold coin]*, is that it still goes into your jacket pocket, if you want to go from Italy to Switzerland. So it's still bid up. It's bid up, if you like, because of more government control.

RS: Russell, you founded "The Library of Mistakes"[161]. So what would you add to this library as you think about what's happening at the moment and what happened last year? What would be the biggest mistake?

Yield curve control, in my opinion, is a disaster for Europe.

RN: I think today will go down in history as one of the greatest mistakes in the history of Europe. Yield curve control, in my opinion, is a disaster for Europe. And it may take many years for that disaster to unfold: economic, political, social. But this is the biggest mistake I've ever seen by a developed-world central banker. I've seen lots of bigger mistakes by emerging-market central bankers. But this one really takes the biscuit, and it's really quite frightening. So, sadly (and I do mean sadly),... I think there will be yield curve control by the European Union. I mean, I'm sure others will follow in due course, but it's a sad day for everybody when this is where we've got to. So the others are mostly humorous. This one isn't.

RS: I agree. Russell, thank you very, very much. We really enjoyed it. I hope you did, too.

RN: Well, best of luck, guys. Thank you!

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161 *See* The Library of Mistakes

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Global Demographics Turn Inflationary

“Demographics is destiny.”

Arthur Kemp

Key Takeaways

- Since in the 1980s the world has experienced a “demographic dividend” that has boosted growth and helped to keep inflation low. But that dividend is now turning into a deficit as the global dependency ratio begins to rise again.
- Between 1991 and 2018, the opening-up of China and Eastern Europe constituted an effective doubling of the labor supply available to advanced economies.
- Over that period, the value of exported goods as a share of global GDP jumped by 70%. Efficiencies from international trade and increased specialization helped to keep inflation low.
- A falling dependency ratio in China was particularly important as it buoyed the country’s productivity and allowed for the export of cheap goods to the developed world.
- But China’s dependency ratio has recently started to rise again due to ageing. From 41 today, it is forecast to reach 50 by 2030, and 70 by 2050.
- Western populations face huge demographic headwinds as well, which will lead to a steep rise in care-intensive diseases such as dementia.
- Demographics will serve as an important, and until now widely overlooked, contributor to the ongoing shift toward higher inflation in the decade ahead.

Introduction

In this chapter we focus on global demographic trends and discuss why we foresee demography, in addition to the monetary and fiscal factors discussed in other chapters, contributing to rising levels of inflation in the coming decades.

The example of Japan, the developed country whose population has aged the most and where inflation has been persistently weak for three decades, has prompted speculation that an ageing population is deflationary. Yet things are not that simple.
Par Bastien Drut

We argue that the relatively low inflation that advanced economies have experienced since the 1990s was made possible by the entry of hundreds of millions of new workers into the global economy, at a time when demographic conditions were favorable. The resulting increase in global productivity helped to keep prices low.

In the following pages, we outline how this came about, why the conditions of the post-1990 era are changing, and what this means for the future.

The Rise and Fall of Post-War Inflation

During the decades that followed the Second World War, the major economic powers of the world transitioned to a more state-led economic model. Government spending gradually rose until the 1970s, when the strains this placed on the private economy led to double-digit inflation and stagnant growth.

The relative fiscal restraint of the first few years after World War 2 soon gave way to the politically irresistible temptation of buying free lunches through inflation.
Saifedean Ammous

Consumer Price Inflation started to come down again in the late 1980s, falling to the 2-3% level, or even lower, where it has remained ever since. We argue that disinflationary supply-side forces of globalization were largely responsible for this trend.

Between 1990 and the mid-2010s, as previously closed countries of the communist bloc liberalized and started to trade globally, the value of exported goods as a share of global GDP rose by 70%.[162] Cheap consumer goods flowed into developed nations, and this helped keep their inflation figures low, even as government spending remained high[163] and monetary policy remained accommodative.

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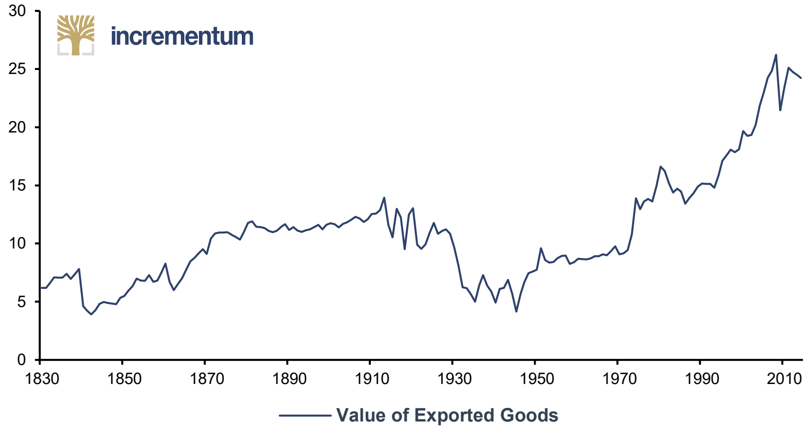
[162] Fouquin, Michele and Hugot Jules: "Two Centuries of Bilateral Trade and Gravity Data: 1827-2014", CEPII Working Paper, May 14, 2016; Our World in Data: Trade and Globalization
[163] Government spending as a percentage of GDP has not changed substantially since the 1970s in most developed economies. For figures *see* Our World in Data: Government spending: 1880 to 2011

Value of Exported Goods, in % of GDP, 1830-2014



Source: Fouqin and Hugot (CEPII 2016), ourworldindata.org, Incrementum AG

The opening up of China – home to one fifth of the world's population – played a particularly important role in shaping international trade dynamics during this period. **Between the late 1970s and 2009, China went from being an effectively closed economy to becoming the world's largest exporter.** The liberalization of China's policies has been discussed at length elsewhere,[164] so in the paragraphs below we focus on the demographic factors that buoyed China's growth, and why these are now starting to change.

The End of the Cold War and Entry of China into the Global Economy

Communism would take off in the twentieth century. It became not merely a spectre but a living reality. And not just in Europe, but for hundreds of millions of people spread across the globe – in places very different from those where Marx expected proletarian revolutions to occur.
Archie Brown, The Rise and Fall of Communism

During the 1970s one third of the world's population lived in socialist command economies and truly global supply chains had yet to emerge. Things started to change in the later years of the decade in China – which represented a large part of the Communist world – following the death of Chairman Mao Zedong.

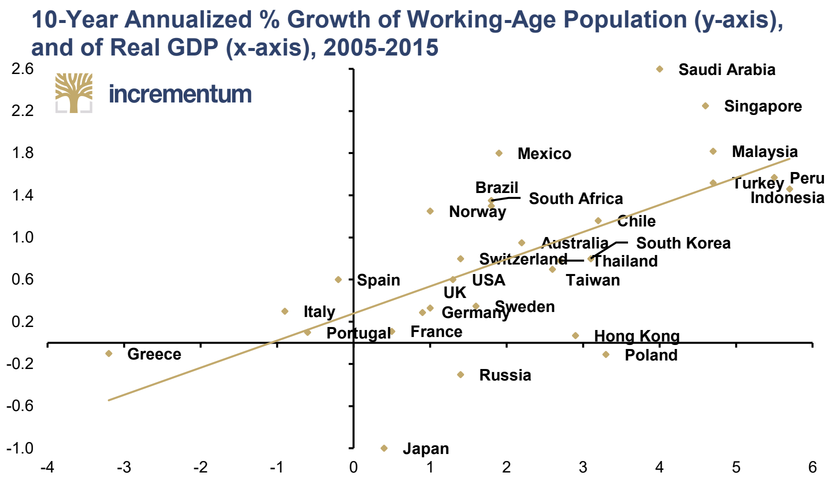
Mao's successor, Deng Xiaoping, introduced the "Reform and Opening-up" policies that liberalized the Chinese economy and gave foreign investors access to the Chinese market. Deng's pro-market reforms led to soaring economic growth, which averaged 10% per annum over the subsequent three decades. Given China's huge population, this development had a profound impact on international trade.

Whilst China was liberalizing, it simultaneously experienced a large and sustained boost to economic productivity due to growing numbers of people in the workforce relative to the number of dependents.[165] Such a shift in demographics is known as a "dividend" because, when the proportion of working people in the population is high there is greater potential for productivity and growth, and fewer resources need to be diverted towards supporting those not engaged in economic activity.

Various empirical studies have shown that there is a strong association between demographic dividends and economic growth. For example, Bloom and Canning found that increasing the growth rate in the working-age

[164] *See* Kroeber, Arthur R.: *China's Economy: What Everyone Needs to Know*, 2016
[165] Dependents are defined as those under 15 and over 65.

population as a share of the total population by one percentage point, increases the rate of per capita GDP growth by 1.394 percentage points.[166] The following chart illustrates this correlation.[167]



Source: Haver, US Census Bureau, ourworldindata.org, UN, Incrementum AG

China's demographic dividend, which manifested itself from the mid-1970s onwards, was primarily the result of three turbulent periods in Chinese 20th-century history, which we outline below. **China serves as an extreme example of a demographic development that can also be found in Europe.**

The Great Leap Forward

Even going flat out, the existing steel mills could not fulfill Mao's target. His response was to order the general population to build "backyard furnaces." At least 90 million people were "forced," […] to construct such furnaces, which Khrushchev not unfairly dubbed "samovar" furnaces, and which produced not steel at all, but pig iron, if that.
Chang and Halliday, *Mao: The Unknown Story*

From the founding of the People's Republic of China in 1949 until 1976, China was under the autocratic rule of Chairman Mao. Society was frequently disrupted by domestic political campaigns, the most impactful of which was the "Great Leap Forward" that began in 1958. In an attempt to boost industrial production through central planning, agricultural workers were pulled off the farms and ordered to work on uneconomic projects, such as the production of steel in small-scale furnaces.[168]

The reduction in farm labor this policy brought about led to crop failures and a famine that, according to research by Yang Jisheng, claimed an estimated 30-40 million Chinese lives.[169] **These events were a tragedy of historic proportions that led to a sharp drop in China's population from 1959-1961**. This fall in population would go on to shape the age profile of China's population in the decades ahead.

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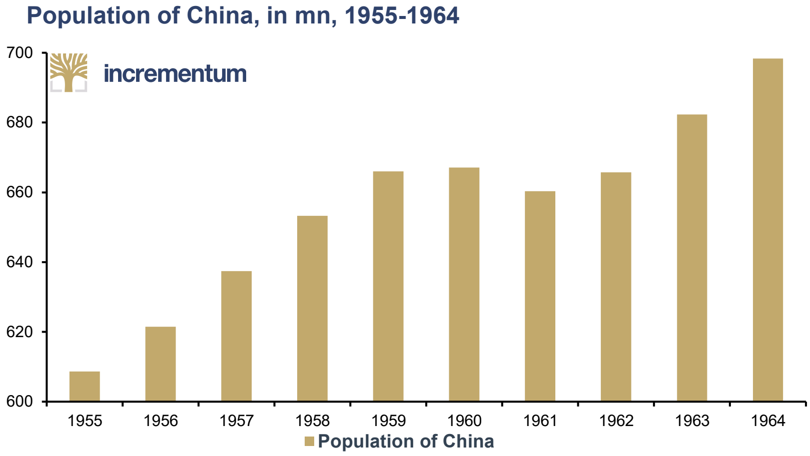
[166] *See* Bloom, David E., David Canning, Guenther Fink, and Jocelyn E. Finlay: "Does Age Structure Forecast Economic Growth?", NBER Working Papers, July 2007
[167] Grindal, Alejandra and Ayers, Patrick: "Demographic Demise or Opportunity?", Ned Davis Research Group, September 21, 2017, p. 12
[168] Kroeber, Arthur R.: *China's Economy: What Everyone Needs to Know*, 2016, p. 164
[169] *See* Yang, Jisheng: *Tombstone: The Untold Story of Mao's Great Famine*, 2012

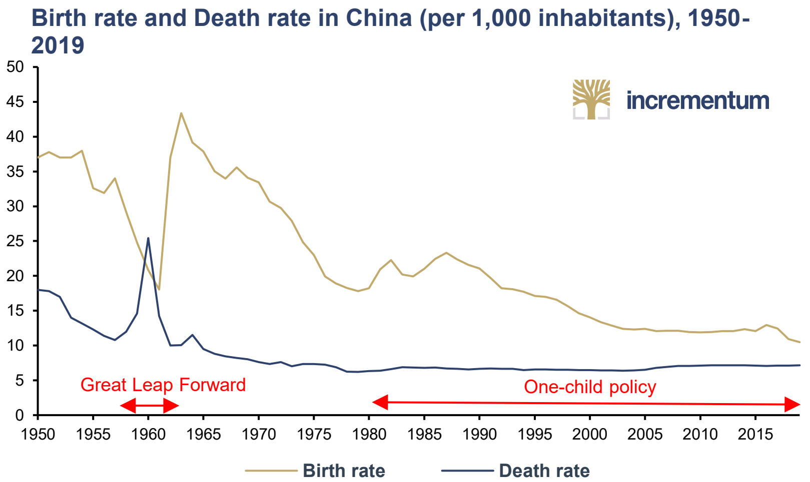


Source: National Bureau of Statistics China, Incrementum AG

The 1963–1973 baby boom

China has its own Baby Boom generation. And China's baby boom generation, because of the size of China itself, is the world's largest baby boom generation.
Howard W. French

The policies of the Great Leap Forward were abandoned in the early 1960s, and the Chinese economy made a brief return to what was relative normalcy for the period. The government renewed calls for families to have as many children as possible, which had been official policy since the founding of the People's Republic in 1949. **China's fertility rate doubled between 1961 and 1963, and a decade-long "baby boom" ensued.**



Source: National Bureau of Statistics China, Incrementum AG

Smaller families and the one-child policy

As a result of the one-child policy and increasing affluence, the demographic and socio-economic profile of China is rapidly changing.
Richard Martin

China's population grew by 30% from 1963 to 1973, rising from 680mn to 880mn people in total. After a peak following the Great Leap Forward, birth rates naturally started to fall again. As noted by Heise, the decline was made more pronounced by changes in Chinese domestic policy in the early 1970s.[170] By that time Chinese policymakers had become concerned that China's population was growing too quickly, and they began to discourage large families. **The country's well-known One-Child Policy came into effect in 1979 and contributed to birth rates remaining low.**

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[170] *See* Heise L.: *China's baby boomers*, World Watch, January-February 1988

The demographic dividend

These two politico-economic developments, the rise of China and the return of Eastern Europe to the world trading system, provided an enormous positive supply shock to the available labour force in the world's trading system.
Goodhart and Pradhan, The Great Demographic Reversal

The combination of developments during these three historical periods meant that **from the mid-1970s China experienced a rapid fall in its dependency ratio.** On the one hand, the number of retirees that China's working-age population needed to support had been reduced due to the mass fatalities of the late 1950s. On the other, there were fewer children due to the recent fall in birth rates. Until the mid-1970s China's dependency ratio was around 80; i.e., for every 100 persons of working age (15–64), there were 80 persons to be cared for. However, **the dependency ratio fell drastically over the subsequent three decades to reach a historic low of just 36 in 2010.** Alongside China's political liberalization, this falling dependency ratio was a significant contributor to the country's record-breaking economic growth.

Eastern Europe

I've been looking for freedom
I've been looking so long
I've been looking for freedom
Still the search goes on.
David Hasselhoff

As China underwent rapid development, political change was also underway within the Soviet bloc. The Berlin Wall fell in 1989. **Eastern Europe was reintegrated into global trade, resulting in an additional 209 million working-age people becoming available to the global economy as a labor force.**[171] The result was further disinflationary pressure as the world benefited from the productivity of these new workers, both through international trade and – in the case of many Western European countries – direct migration and the downward pressure it puts on wages, especially for low-skilled workers. For example, in 2018 roughly 1.5mn people from Eastern Europe were working in Germany[172] and around 1.1mn were working in the UK.[173]

The disinflationary forces of China and Eastern Europe

The opening up of China and Eastern Europe constituted an effective doubling of the labor supply available to the world's advanced economies between the years 1991 and 2018.[174] This opening-up was accompanied by the lifting of barriers to international trade on a global level, through trade rounds in Uruguay in 1986 and Doha in 2001.

We uncover a puzzling link between low-frequency inflation and the population age-structure: The young and old (dependents) are inflationary whereas the working age population is disinflationary.
Juselius and Takáts, The Age-Structure–Inflation Puzzle

These political developments, and the demographic trends that accompanied them, were disinflationary for the following reasons. Statisticians measure inflation by calculating the change in the money price of the Consumer Price Index: a weighted basket of commonly purchased consumer goods and services. When other factors, such as the money supply, are constant, a larger quantity of consumer goods produced means there will be more goods on the market per unit of currency. This pushes down consumer goods prices, which lowers inflation. **Post-1990s globalization was disinflationary because the efficiency it created through international division of labor brought about a worldwide surge in the production of goods.**[175]

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171 Goodhart, Charles, and Manoj Pradhan: *The Great Demographic Reversal: Ageing Societies, Waning Inequality, and an Inflation Revival*, 2020, p. 2
172 *See* "Arbeitsmarkt: Osteuropäer füllen Lücken" ("Labor market: Eastern Europeans fill gaps"), Deutsche Welle, October 7, 2018
173 *See* "80% of Britain's 1.4m eastern European residents are in work", July 10, 2017
174 Goodhart, Charles, and Manoj Pradhan: *The Great Demographic Reversal: Ageing Societies, Waning Inequality, and an Inflation Revival*, 2020, p. 3
175 *See* Statista.com: "Trends in global export volume of trade in goods from 1950 to 2019", January 4, 2021

At the same time a falling global dependency ratio had a further disinflationary effect on the world economy.[176] In general, workers produce more than they consume – otherwise it would not be profitable to employ them – while dependents such as children and the elderly tend to consume but not produce. This means that when the share of people of working age increases, there is greater production relative to consumption, which pushes the price of goods down.

This relationship between dependency ratio and inflation, and its impact on the post-1990s period, has been demonstrated empirically by the work of Juselius and Takáts. **They studied data from 22 advanced economies from 1955 to 2014 and found a significant relationship between a high dependency ratio and inflationary pressure**. **Juselius and Takáts conclude that the age-structure effect is forecastable. They see demographics as pointing to an increase in inflationary pressures over the coming decades.**[177]

By joining the WTO, China is not simply agreeing to import more of our products, it is agreeing to import one of democracy's most cherished values: economic freedom.
Bill Clinton

As we have seen, the disinflationary forces that resulted from a combination of political liberalization, free trade, and favorable demographics allowed headline inflation figures in advanced economies to stay low despite the massive monetary and fiscal expansion these countries undertook.[178] When analyzing the causes of inflation trends in the post-1990s period, Grendal and Ayers point to China's ascension to the World Trade Organization (WTO) in 2001 as being particularly significant in creating disinflationary pressure.[179] **Without globalization and favorable demographics, it is safe to say that inflation figures would have been a lot higher in the post-1990 period.**

Rather than embracing the benefits of falling prices and reducing their national debt, developed economies instead chose to maintain historically high levels of government spending. Most continued to run persistent deficits, which had the effect of pushing government debt-to-GDP ratios to new all-time highs.[180]

摸着石头过河
Feel for the stones as you make your way across the river.
Deng Xiaoping's metaphor for how China's development should proceed cautiously.

Under normal circumstances, persistent deficits and accommodative monetary policy would have led to higher rates of inflation; but, as discussed above, **inflationary pressures were offset by the disinflationary forces of globalization coupled with favorable demographics.** Headline CPI figures therefore remained close to central bank target levels of 2–3%, and often fell below them.[181]

Chinese trade surpluses

Disinflationary trends were influenced further by the large trade surpluses that China started to run from the mid-2000s, which reached up to 8% of its GDP. The size of these surpluses was largely the result of the policies of the People's Bank of

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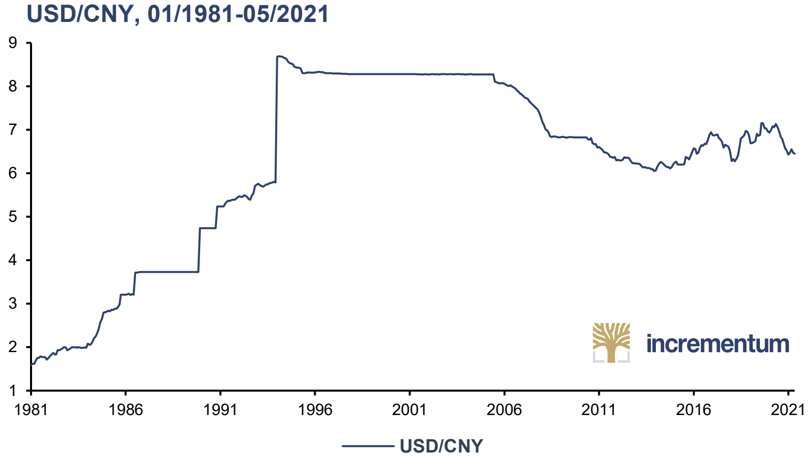
176 *See* Our World in Data: Age dependency ratio projected to 2100, World
177 *See* Juselius, Mikael and Takáts, Előd: "The Age-Structure–Inflation Puzzle", *Bank of Finland Research Discussion Paper No. 4*, 2006
178 *See* Kodaki, Mariko and Manabe, Kazuya: "No end in sight for record-high public debt fueled by COVID-19", NIKKEI Asia, October 25, 2020
179 Grindal, A. and Ayers, P.: *Demographic Demise or Opportunity?*, Ned Davis Research Group, September 21, 2017, p. 22
180 *See* Kodaki, Mariko and Manabe, Kazuya: "No end in sight for record-high public debt fueled by COVID-19", NIKKEI Asia, October 25, 2020
181 *See* Macrotrends: OECD members Inflation Rate 1960-2021

China (PBoC), which aimed to maintain relative exchange rate stability with the US dollar.[182]

In the planned economy period, China – like virtually every other Communist country – had a severely overvalued exchange rate, reflecting the Communist economic principle that domestic investment in heavy industry, rather than international trade, was the route to wealth.
Arthur Kroeber

Between the start of the Reform and Opening-Up period in 1978 and 1997, the yuan underwent a radical revaluation. According to economist Arthur Kroeber, China had a severely overvalued exchange rate during the Mao era, reflecting the Communist economic principle that domestic investment in heavy industry, rather than international trade, was the route to wealth.[183] A strong currency allowed China to import expensive capital goods from other Communist states more easily.

However, following the introduction of the Reform and Opening-Up policies, **the PBoC allowed the yuan's exchange rate to fluctuate freely, resulting in a heavy devaluation from 1.5 to the US dollar in 1979 to 8.7 in 1997.** The PBoC then started to control the value of the yuan to provide currency stability to international investors, initially maintaining an exchange rate of 8.7 yuan to the US dollar, and then allowing modest appreciation.



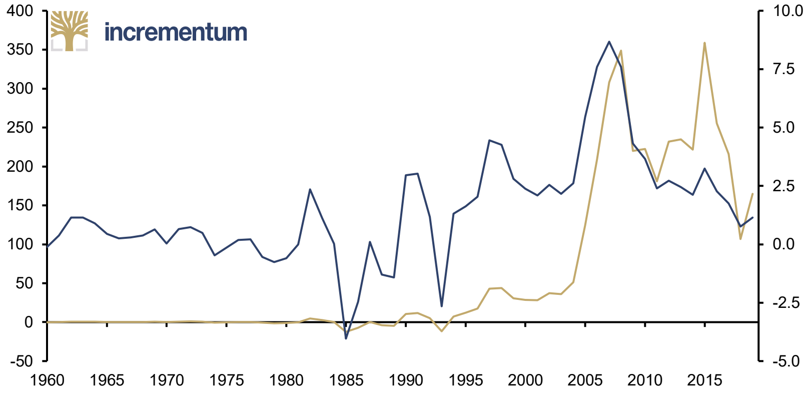
Source: Reuters Eikon, Incrementum AG

Whilst the PBoC's policies helped to achieve relative exchange rate stability, the yuan was likely greatly undervalued relative to what its price would have been on the free market. **The result was that China ended up consistently exporting more real goods to the rest of the world than it was importing, with the trade surplus being invested by the PBoC in US Treasuries.**

By the late 2000s, China's export surplus was the largest in the world, amounting to around 0.5% of global GDP. The countries to which China exported – primarily advanced economies – benefited from this effective subsidy to the price of their consumer goods. **As a result of China's exchange rate policies, it was effectively exporting price deflation to the rest of the world.**

182 Kroeber, Arthur R.: *China's Economy: What Everyone Needs to Know*, 2016, p. 141f.
183 Kroeber, Arthur R.: *China's Economy: What Everyone Needs to Know*, 2016, p. 142

Trade Balance of China, in USD bn (lhs), and in % of GDP (rhs), 1960-2019



Source: Macrotrends.net, Incrementum AG

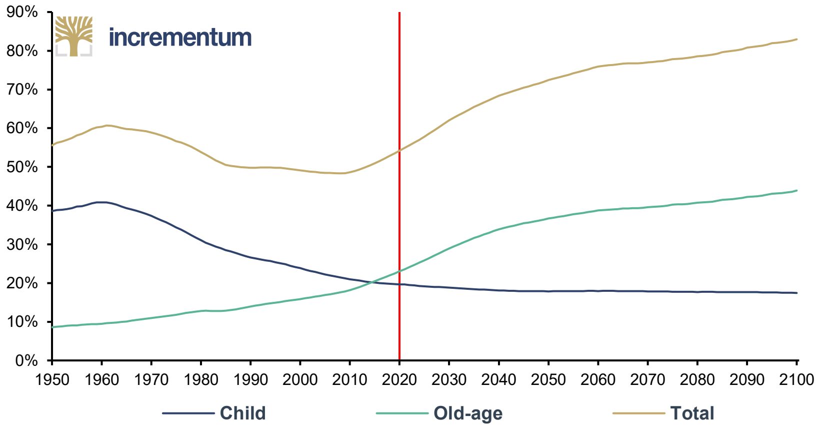
Globally, the number of persons aged 80 years or over is projected to increase more than threefold between 2017 and 2050, rising from 137 million to 425 million. **United Nations**

This dynamic was made possible by financial repression within China's borders. Chinese bank deposit rates were held below the rate of domestic inflation from the mid-2000s, and foreign investment by Chinese citizens was limited by capital controls.[184] This meant that Chinese citizens took on the costs of subsidizing their exports to the rest of the world in the form of higher domestic inflation.

Favorable Conditions Are Starting to Reverse

Today, the favorable demographic conditions that the world has enjoyed since the 1990s are starting to change. The population of the world is ageing, and this ageing is particularly pronounced in developed economies.

Age Dependency Ratios of High Income Countries, 1950-2100



Source: Engelgau, Michael et. al: Capitalizing on the Demographic Transition: Tackling Noncommunicable Diseases in South, 2011, p. 18, ourworldindata.org, UN, Incrementum AG

According to UN projections, the number of over-80s globally is forecast to triple between now and 2050.[185] This trend is of great economic significance given the over-80s age group's vulnerability to diseases such as dementia that require a large amount of labor-intensive care to manage. Along with the growth in the number of elderly people, the number of dementia sufferers globally is forecast to almost triple between now and 2050 as populations age.[186]

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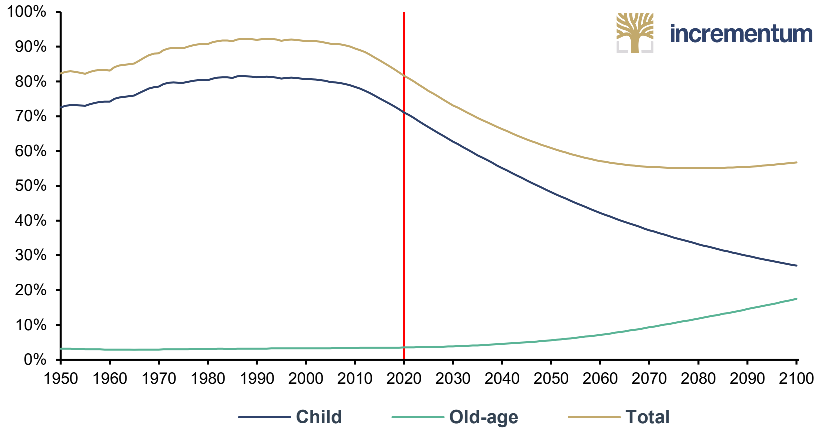
[184] Kroeber, Arthur R.: *China's Economy: What Everyone Needs to Know*, 2016, p. 132
[185] *See* UN: "World Population Aging", 2017
[186] *See* Pratchett, Terry: "A global assessment of dementia, now and in the future", *The Lancet*, September 5, 2015

Age Dependency Ratios of Low Income Countries, 1950-2100



Source: Engelgau, Michael et. al: Capitalizing on the Demographic Transition: Tackling Noncommunicable Diseases in South, 2011, p. 18, ourworldindata.org, UN, Incrementum AG

Whilst there has been much talk about both negative and positive effects of the rise of automation and its impact on the labor market, it seems unlikely that technological advances will be able to replace the need for real human contact in the realm of caregiving in the foreseeable future.[187] This situation impacts on inflation, because **the increased demand for labor in caregiving will bid labor away from other productive uses, reducing the supply of consumer goods and pushing up their prices.**

Nearly 47 million people globally are living with dementia today, with about 10 million new cases being diagnosed every year. Of even greater concern is that by 2050 the number of people living with dementia is projected to nearly triple to more than 130 million.
The Lancet

Furthermore, the costs of caring for ageing populations will inevitably fall on governments, which will need to find ways to fund this additional spending when their national debts are already at record highs. It seems likely that there will be recourse to accommodative monetary policy to ease government debt burdens, which will act as a further inflationary factor.

In addition, various studies confirm a link between ageing and lower economic growth. For example, Chapter 3 of the 2014 World Economic Outlook by Callen et al. finds that per capita GDP growth is positively correlated with increases in the working-age population share and negatively correlated with increases in the elderly share.[188]

China's Coming Demographic Deficit

As referenced above, China will be one of the countries most impacted by ageing, as the demographic dividend it has enjoyed in recent decades turns into a demographic deficit. The Chinese baby boomers of the 1963-1973 period that we described above are now starting to retire on a mass scale. **The country's proportion of over 60s is due to rise from 17% to 25% by 2030, with the trend continuing to rise toward 35% by the middle of the century.**[189]

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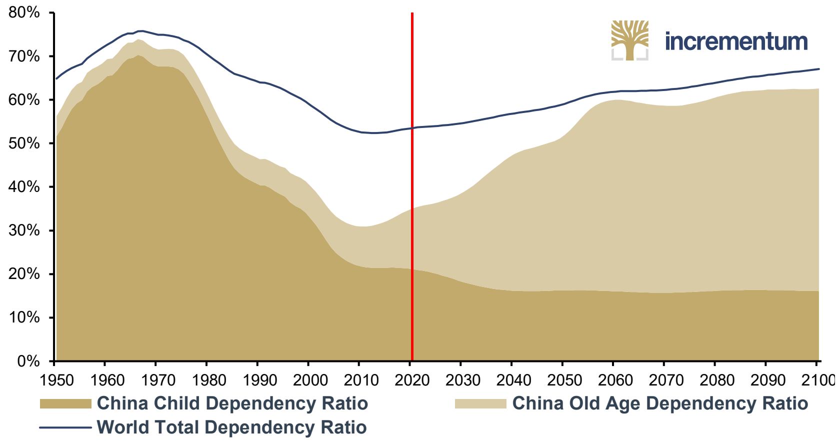
[187] *See* Goodhart, Charles, and Pradhan, Manoj: *The Great Demographic Reversal: Ageing Societies, Waning Inequality, and an Inflation Revival*, 2020, p. 63
[188] *See* Yoon, Jong-Won, Kim, Jinill and Lee, Jungjin: "Impact of Demographic Changes on Inflation and the Macroeconomy", *IMF Working Papers*, November 2014
[189] Statista: Share of population aged 60 and older in China from 1950 to 2010 with forecasts until 2100; A recent PBoC study therefore recommends that the government encourages Chinese to have families with three or more children. *See* "China population: what's driving central bank concern about the nation's ageing workforce?", SCMP, April 25, 2021, "关于我国人口转型的认识和应对之策", *PBC Working Paper*, No. 2021/2, March 26, 2021 (published in Chinese).

China's population is likely to peak in 2023. People had expected peak population in China to be a decade away, when in fact, it's not, it's right around the corner.
Tony Nash

Due to the lack of children born during the One-Child Policy era – which only ended in 2015 – the ratio of dependents to the working-age population will undergo a dramatic shift, moving from current levels of around 41% towards 50% by the year 2030 and 75% by the middle of the century.

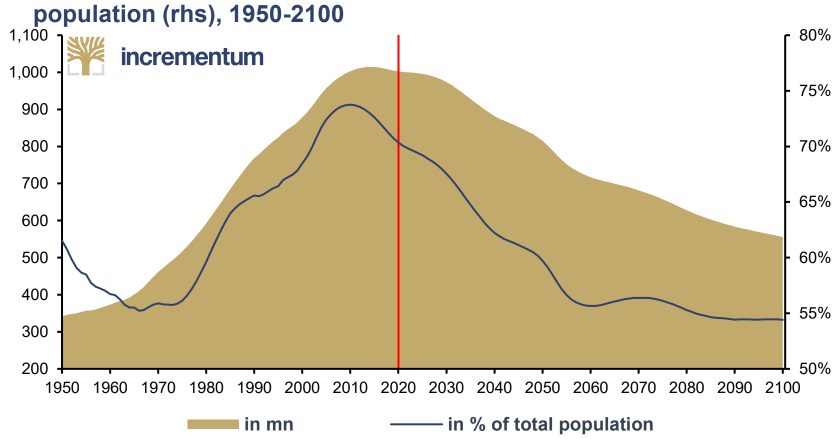
Age Dependency Ratios of China and the World, 1950-2100



Source: ourworldindata.org, UN, Incrementum AG

Along with the changes in the dependency ratio, the size of China's working-age population has already peaked in absolute terms and is now starting to shrink. Projections are shown in the chart below.

Working-Age Population of China, in mn (lhs), and in % of total population (rhs), 1950-2100



Source: ourworldindata.org, UN, Incrementum AG

The fact that there will be fewer workers in China overall and that these workers will have to support an increasing number of dependents will put a drag on productivity and reduce the country's current account surplus, potentially turning it into a deficit within a few years.[190] These factors will neutralize the disinflationary impact of China that the world has gotten used to in recent decades.

[190] *See* "China may soon run its first annual current-account deficit in decades", *The Economist*, March 16, 2019

What About Demographic Dividends in the Rest of the World?

Whilst the average age of the world population is rising, demographic projections for some developing regions such as Africa and South Asia remain relatively favorable.[191] These regions will contribute significantly to global growth, but the scale of change we will see in the next couple of decades is unlikely to rival that of post-1990 China. The reasons for this are both political and geographic. Whilst China has benefited from both a large population and relatively unhindered trade within its borders, South Asia and Africa are much more politically fragmented.

Goodhart and Pradhan provide the following analysis of the political obstacles to growth in India, which we believe apply to many parts of the developing world. They write:

> *"India will be able to attract global capital to its shores, but the lack of administrative capital and its system of democratic checks and balances will not allow a single-minded, China-esque model of growth to materialise. India's administrative capital is starting off from an extremely weak level and internal collisions within its multi-party system as well as between the states and the federal government make a coordinated policy of growth difficult to manage."*[192]

Whilst we would question the need for growth strategies to be centrally coordinated, we agree with the contention that competing local interests in many parts of the developing world will make it harder to achieve the pace of development seen in China.

You could fit the USA, Greenland, India, China, Spain, France, Germany and the UK into Africa and still have room for most of Eastern Europe. We know Africa is a massive land mass, but the maps rarely tell us how massive.
Tim Marshall,
Prisoners of Geography

Furthermore, in the case of Africa there are additional challenges related to the continent's geography. While Africa has a similar population to China, it is roughly three times its physical size, giving it a much lower population density. As discussed in Tim Marshall's book *Prisoners of Geography,* Africa also faces natural development challenges such as a lack of navigable waterways, which could connect inland populations to the rest of the country.[193] Geographic factors and low population density will make large-scale manufacturing across the African continent a difficult task on a scale that will significantly impact global price developments.

Why didn't inflation happen in Japan?

If ageing is inflationary, then why is it that the Japanese economy has experienced very low inflation – averaging 0.5% per annum – over the last couple of decades as its population has aged?

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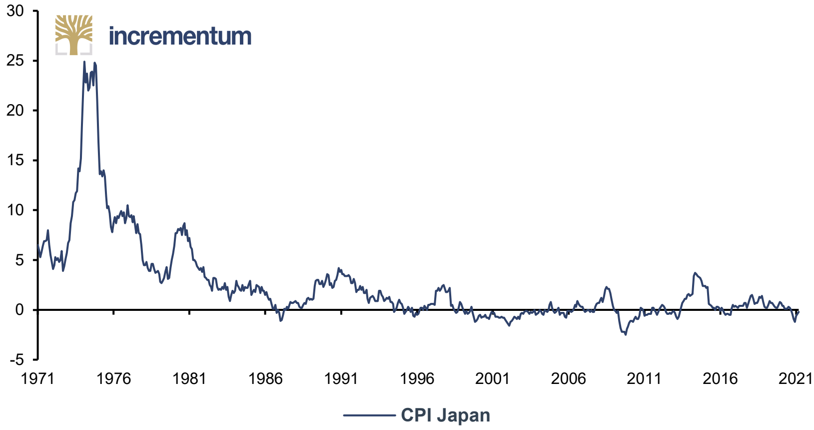
[191] *See* Subrahmanyam, Sanjay et al.: "India – Demographic trends", *Encyclopedia Britannica*; Bloom, David, Kuhn, Michael and Prettner, Klaus: "Africa's prospects for enjoying a demographic dividend", voxeu.org, October 20, 2016
[192] Goodhart, Charles, and Pradhan, Manoj: *The Great Demographic Reversal: Ageing Societies, Waning Inequality, and an Inflation Revival*, 2020, p. 159
[193] *See* Marshall, Tim: *Prisoners of Geography*, Chapter 5, 2016

CPI Japan, in %, 01/1971-03/2021



Source: Reuters Eikon, Incrementum AG

While the shrinking of Japan's workforce was indeed inflationary, Japan was a particular beneficiary of the global demographic dividends we describe in this chapter. From the 1990s Japanese corporations engaged in a large investment drive that allowed them to increase domestic worker productivity through outsourcing. Japan's proximity to a booming China, from which it receives around a quarter of its imports[194], played an important role in buoying its economy and preventing inflation. As Goodhart and Pradhan write, "*Japan's labour force was shrinking just as the world became overflowing with cheaper but efficient labour.*"[195]

Many people think that QE alone is inflationary, but it's not. At most, QE alone is anti-deflationary, or inflationary for asset prices in particular. On its own, QE doesn't result in more money in peoples' pockets chasing more goods, or higher commodity prices.
Lyn Alden

In addition, Japanese monetary policy was much less expansionary than is commonly believed. As Lyn Alden points out in her article *Economic Japanification: Not What You Think* – despite huge expansions in Japan's base money supply – from 2000 to 2020 broad money supply growth averaged just 2.9% per year, compared to 5.5% for the Euro Area and 6.2% for the United States.[196] It is broad money supply rather than base money supply that has a direct impact on consumer prices. **It is our view that global deflationary trends and low money supply growth are better explanations of Japan's low post-1990s inflation than ageing demographics.**

When we compare Japan's situation to the global economy today, we see that the economies that make up the global manufacturing complex are now ageing together. This limits the ability of developed economies to pursue a Japan-style strategy of expanding supply chains to developing economies with abundant labor.

I've never really wanted to go to Japan. Simply because I don't like eating fish. And I know that's very popular out there in Africa.
Britney Spears

Alongside demographics, there are additional reasons why Japan's ability to accrue high levels of government debt without suffering high inflation will not be repeatable in other developed economies such as the US. As Luke Gromen writes:

> *"Japan is a current account surplus, internally-funded nation, non-reserve currency issuing nation with a massively positive Net International*

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194 *See* Watanabe, Akira et al.: "Japan – Trade in Japan", *Encyclopedia Britannica*
195 Goodhart, Charles, and Manoj Pradhan: *The Great Demographic Reversal: Ageing Societies, Waning Inequality, and an Inflation Revival*, 2020, p. 142
196 *See* Alden, Lyn: "Economic Japanification: Not What You Think", Lyn Alden, Investment Strategy

Investment Position (NIIP) as a % of GDP. In contrast, the US has the biggest Current Account deficit in the world, the US has historically been externally-funded, the USD is the global reserve currency, and the US has a massively negative NIIP (-62% of US GDP)."[197]

Conclusion

The advantage of studying demographics is that they are relatively predictable: If one knows the fertility rate at a given time, it is possible to predict the age make-up of a country's population decades into the future with a relatively low margin of error.

As we have seen, the world has just been through an era where demographic and political conditions were highly favorable to economic growth, but our analysis suggests that era is now coming to an end.

Demographics is destiny.
Arthur Kemp

As the world ages, the disinflationary forces resulting from favorable demographics that we have become used to are starting to reverse. **These developments will contribute to causing the global pendulum to swing from lower to higher inflation in the coming decade.**

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197 Gromen, Luke: "Eagle Pointe 63 (1)", March 25, 2021

De-Dollarization 2021: Europe Buys Gold, China Opens a Digital Front

“For almost 60 years, the world complained but did nothing about it. Those days are over.”

Stephen Roach

Key Takeaways

- China is working on all fronts to undermine the hegemony of the US dollar. Russia and Europe are as well benefiting from this.
- The digital yuan has come a long way – but the fact that China is using the currency as a surveillance tool puts many off. What will Europe and the US do?
- The Biden administration has already set its sights on the digital yuan, but the Federal Reserve is still hesitant about a digital dollar.
- Central banks around the world continue to buy gold – especially in Eastern Europe. The euro could emerge stronger from the crisis.

New Love Does Not Rust

Fifty years. That is how long Saudi Arabia wants to guarantee to supply emerging superpower China with "black gold". This was the statement by the CEO of the Saudi oil company Saudi Aramco, Amin Nasser, at the China Development Forum at the end of March. He called China's energy supply a "top priority" for his company.[198] **It is another step by Saudi Arabia towards their new love: China.**

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

Saudi Arabia is the largest oil producer in the world. China is the largest importer. The Saudis are China's most important supplier – but Russia is always hot on their heels. In a world increasingly characterized by the shift to renewable energy, the Saudis' promises to Beijing seem a bit odd. But one should not make the mistake of underestimating their importance. Ever since Washington signed on to its infamous petrodollar pact with Riyadh in the 1970s, the oil trade has been of elemental importance to the world's monetary operating system. It is not so much who buys oil or how much, but with what currency they buy it.

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.
Zbigniew Brzezinski, *The Grand Chessboard*, 1997

In previous issues of the *In Gold We Trust* report we have described in detail the dissatisfaction of Europe, Russia, China and Iran with having to trade oil in US dollars.[199] Europe and China do not understand why they should have to depend on Washington. Iran does not, in any case. But Saudi Arabia has a special role to play in this game, which is increasingly turning into a conflict between Washington and Beijing. China now wants to turn its currency into a "petroyuan". And Saudi Arabia is finding it increasingly difficult to deny its most important customer this wish. There is still no official confirmation that the two nations trade some of their oil in the Chinese currency. Riyadh does not yet allow itself to provoke Washington in this way. **But Saudi Aramco's announcement that it will soon issue yuan bonds tells the whole story.**[200]

Courtesy of Hedgeye

This is another significant step toward de-dollarization – the slow but steady move from a system with a single world reserve currency to a multipolar world in which the euro and yuan play supporting roles alongside the US dollar.

However, the US has so far showed no signs of giving up its "exorbitant privilege" and saying goodbye to the advantages that the US dollar grants it. And China is pursuing several goals at once: developing its financial center; strengthening its own currency, the renminbi (yuan), in international trade; and expanding its economic dominance in Asia. Officially, China has wanted a supranational solution to the reserve currency issue since 2009,[201] but its actions tell a different story.

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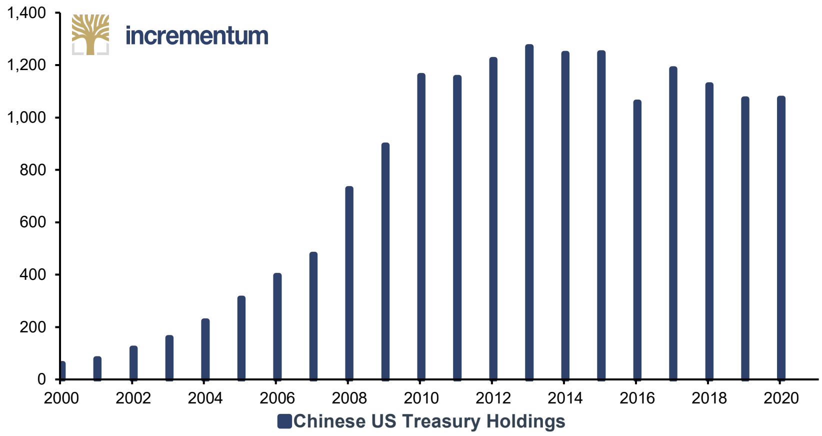
[198] *See* Xu, Muyu und Tan, Florence: "Saudi Aramco to prioritise energy supply to China for 50 years, says CEO", Reuters, March 21, 2021
[199] *See* "De-Dollarization 2020 –The Endgame Has Begun", *In Gold We Trust* report 2020, "De-Dollarization: Europe Joins the Party", *In Gold We Trust* report 2019, "De-Dollarization –From the Dollar to Gold, Via the Yuan and the Euro", *In Gold We Trust* report 2018
[200] *See* Kibe, Hidemitsu: "Saudi Aramco hints at future yuan bonds in potential coup for China", Nikkei Asia, November 21, 2021
[201] *See* Anderlini, Jamil: "China calls for new reserve currency", *Financial Times*, March 24, 2009

Both parties in a relationship can choose whether they will have a win-win cooperative-competitive relationship or a lose-lose mutually threatening relationship, though it takes both of them to agree on what type of relationship they will have.
Ray Dalio

The aim is to gradually bring the renminbi on a par with the US dollar and the euro. This goal is a long way off; only a very small part of international reserves is currently held in the Chinese national currency. But Beijing has improved its position in recent years through clever maneuvers in the oil and gold trade. The central bank's first verbal assault on the US dollar monopoly came in 2009 and was followed four years later by an announcement that China would no longer accumulate US bonds. Then, in September 2014, China launched a gold fixing in yuan.[202] Four years later, the basis for oil trading in the Chinese national currency was laid.[203]

Chinese US Treasury Holdings, in USD bn, 2000-2020



Source: Reuters Eikon, Incrementum AG

Now the digital battle has started. China is leading in the race to digital central bank currencies (CBDC). Europe and the US are lagging. In this chapter we document how the battle for dominance in the field of currencies has evolved over the past year and the role gold plays in it. And how and why the digital front is rapidly becoming the most important one. **The focus remains on the conflict that will likely occupy us for generations to come: the US versus China.**

China and Russia Are Driving De-Dollarization

The only thing we owe China is a bank statement. You could argue that this is actually a bad deal for China.
Stephanie Kelton

At the end of 2020, the world was again entertained as US President Donald Trump was ushered out of office, replaced by Joe Biden, Barack Obama's vice president. Around the globe, much has been said about the differences between Trump and Biden, but regular readers of the *In Gold We Trust* report know that it basically does not matter who sits in the White House. The long-term conflicts between the world's major power centers are hardly affected by US elections.

China, Russia deepen cooperation in what could be Biden's defining challenge as president.
Frederick Kempe

It is no wonder that Moscow and Beijing have continued to move closer together after Biden's election, even if the supposedly much more aggressive Trump is now history. At the end of March, Russian Foreign Minister Sergei Lavrov was in China, and even the Western news agencies reported on the talks in the first paragraphs of their articles:

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[202] *See* Yap, Chui-Wei: "Shanghai Gold Exchange Launches International Board", *The Wall Street Journal*, September 7, 2014
[203] *See* Chatterjee, Sumeet und Meng, Meng: "Exclusive: China taking first steps to pay for oil in yuan this year - sources", *Reuters*, March 29, 2018

> *"Russian Foreign Minister Sergei Lavrov began a visit to China on Monday with a call for Moscow and Beijing to reduce their dependence on the U.S. dollar and Western payment systems to push back against what he called the West's ideological agenda."*[204]

The relationship between Russia and China is currently better than ever before in history, Lavrov said:

> *"The international situation is undergoing profound changes, with new centres of economic, financial and political influence growing stronger. (…) However, these objective developments, which are leading to the formation of a truly multipolar and democratic world, are unfortunately being hindered by Western countries, particularly the United States. (…) They seek to continue to dominate at any cost on global economy and politics and impose their will and requirements on others."*[205]

And, lest anyone forget what it is all about, the Russian foreign minister added:

> *"We need to reduce sanctions risks by bolstering our technological independence, by switching to payments in our national currencies and global currencies that serve as an alternative to the US-Dollar. (…) We need to move away from using international payment systems controlled by the West."*[206]

A day is long, but a lifetime is short.
Russian Proverb

The talks between Lavrov and Chinese Foreign Minister Wang Yi were preceded by an unsuccessful rapprochement between Washington and Beijing. However, Beijing is always more reserved than Moscow when it comes to differences of opinion with Washington. Nevertheless, it is clear that Washington's claim to sole monetary power is no longer acceptable. A Chinese Foreign Ministry spokeswoman said after the meeting: "*China and Russia always stand together in close cooperation, firmly reject hegemony and bullying practice, and have become a major force for world peace and stability.*"[207]

I strongly believe that the misuse of the role of the US dollar as an international currency will ultimately lead to its role being undermined.
Sergei Lavrov

In addition to China and Russia, which have been expanding bilateral trade in their own currencies for years and already conduct at least a quarter of cross-border business in rubles and yuan,[208] Iran and NATO member Turkey also belong to the club of US dollar opponents.[209] It is also striking that Lavrov, in addition to his mention of "*our national currencies*", also speaks of "*global currencies that serve as an alternative to the dollar*", which clearly refers to the euro. The latter is increasingly used in trade between states that want to move away from the US dollar. Russia holds most of its currency reserves in euros, although relations with the EU remain strained. Apparently, the long-term ties have not been broken despite the conflict over Crimea and the European sanctions.

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204 Tétrault-Farber, Gabrielle und Osborn, Andrew: "Russia's top diplomat starts China visit with call to reduce U.S. dollar use", *Reuters*, March 22, 2021
205 Krishnan, Ananth: "China, Russia look to deepen 'best in history' ties", *The Hindu*, March 22, 2021
206 *See* Blinova, Ekaterina: "Dumping the Dollar: Will China, Russia, Turkey, and Iran Create a New International Currency?", *Sputnik News*, March 24, 2021
207 O'Connor, Tom: "After US Talks Turn Tense, China Turns to Russia to 'Advance Cooperation'", *Newsweek*, March 22, 2021
208 *See* "De-dollarization in overdrive: Russia & China boost settlements in national currencies to 25%", *RT News*, January 3, 2021
209 *See* "Iran, Russia and Turkey signal growing alliance", Defcon Warning, March 26, 2021

After all, Russia's President Vladimir Putin even said in 2010 that Russia wanted to join the euro one day.[210] And earlier this year, he underscored his desire to improve relations with Europe again:

> *"Of course, Western Europe and Russia should be together. Today's situation is not normal. (...) If we can rise above the problems of the past, then a positive phase of relationships would await us. (...) But love is impossible if it is only declared by one side. It should be mutual."*[211]

Russia followed up its words with deeds and is currently preparing to issue a euro bond.[212] **Russia is also the only big country where de-dollarization is a matter of state policy and where the state media celebrates every sale of US bonds.**[213]

...And the Euro Benefits

The mighty US dollar continues to reign supreme in global markets. But the greenback's dominance may well be more fragile than it appears, because expected future changes in China's exchange-rate regime are likely to trigger a significant shift in the international monetary order.
Kenneth Rogoff

In general, the euro always benefits as a neutral third currency when members of the anti-US dollar club do not want to resort to their own currencies. Like the US dollar, the euro offers a stable, widely accepted alternative; and the euro is the only currency that has been able to establish itself to some extent alongside the US dollar. However, it has always ranked second by some margin. Two-thirds of the international bond markets are denominated in US dollars, and three-fifths of all cross-border payments are made in the US currency.[214]

But change is happening. In March, the International Monetary Fund (IMF) reported that the share of US dollars in international currency reserves has recently fallen significantly to a level last seen in 1995. As a result, the US dollar currently accounts for around 59% of currency reserves. The share of the euro has risen from 20.5% to 21.2%, and that of the yuan from 2.1% to 2.3%. (At the end of 2019, the Chinese currency was still at 1.9%.) Canadian banker Bipan Rai of CIBC put it this way: "*This is a slow burn theme, but we are of the view that we're eventually headed into a 'multiple reserve currency' framework over time.*"[215]

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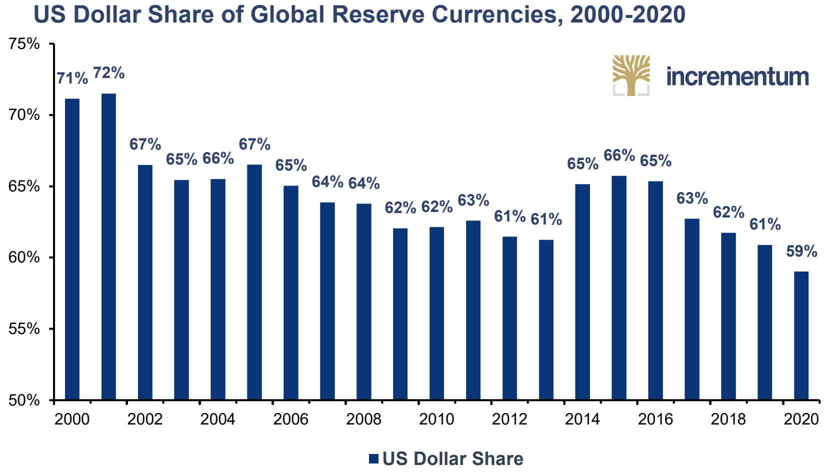
210 *See* Armistead, Louise: "Putin: Russia will join the Euro one day", *The Telegraph*, November 26, 2010
211 "Putin says Russia wants better ties with Europe", Euractiv, January 27, 2021
212 *See* Korsunskaya, Darya: "Russia, under fresh US sanctions threat, says ready to issue Eurobond soon", Reuters, March 22, 2021
213 *See* "Russia continues ditching US Treasuries as part of state de-dollarization policy", *RT News*, January 20, 2021
214 *See* Carter, Radigan: "Back to The Decentralized Future", February 1, 2021
215 Barton, Susanne und Sirtori-Cortina, Daniela: "Dollar's Share of Global Reserves Sinks to Lowest Since 1995", March 31, 2021



Source: IMF, Incrementum AG

We share this assumption. The fact that, alongside Russia, China is now also issuing eurobonds says a lot.[216] And Brussels' ambitious plans to issue joint bonds of the euro countries on a grand scale for the first time in the wake of the Covid-19 crisis could further strengthen the euro's position. Without common eurobonds, the European currency will be doomed to be number two forever.[217] The new EU Covid-19 recovery fund *"will facilitate diversification out of the US dollar by offering liquid, high-rating, euro-denominated debt"*[218], said Valentin Marinov, an analyst at French bank Credit Agricole.

The toughest thing about the power of trust is that it's very difficult to build and very easy to destroy. The essence of trust building is to emphasize the similarities between you and the customer.
Thomas J. Watson

The fact that the Europeans do not use the euro as an instrument of their power, as the Americans do, also makes the euro attractive to China, Russia and other countries. In the words of Vladimir Zotov, a director of the Ural Bank for Reconstruction and Development, "*If exports and imports between them are more or less the same, it does not matter that much which currency is used. The countries must agree that both their national currencies are equal, or find a common currency, like the Euro.*"[219]

That Europe itself has been working for decades to break away from the overpowering US and at least pay for its own imports and exports in euros is something we have known at least since **former EU Commission President Jean-Claude Juncker's legendary farewell speech in September 2018:**

> *"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. (…) The euro must become the face and the instrument of a new, more sovereign Europe."*[220]

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216 *See* Choong Wilkins, Rebecca, Azevedo Rocha, Priscila und Zhou, Ina: "China Raises $4.75 Billion as Euro-Bond Sale Draws Bumper Bids", Bloomberg, November 18, 2020
217 *See* "EU sovereign bonds can reshape the bloc's future", *Financial Times*, July 23, 2020
218 Barton, Susanne und Ainger, John: "Threat to Dollar's Global Supremacy Revived by EU Stimulus Deal", Bloomberg, July 21, 2020
219 "Press review: US sanctions eroding dollar and Japan seeks to build bridges with Russia", TASS Russian News Agency, February 8, 2021
220 Jean-Claude Juncker: "State of the Union 2018 - The hour of European sovereignty", September 12, 2018

The End of the US Dollar – Yet Again?

In due time, the dollar, currently the anchor currency for roughly two-thirds of world GDP, could lose nearly half its weight.
Kenneth Rogoff

The idea that the US dollar could be replaced as the world's reserve currency is certainly not new. There are new proponents of that idea in every financial crisis – even in the US itself, where there is more freedom of speech than in Russia, China or Saudi Arabia. At the height of the Covid-19 crisis, it was Yale economist Stephen Roach who attracted attention with a particularly negative US dollar scenario. The "*era of exorbitant privilege is coming to an end*", the economist wrote in a Bloomberg article in June 2020: "*For almost 60 years, the world complained but did nothing about it. Those days are over*."[221] The phrase *exorbitant privilege* was coined by former French Finance Minister and President Valery Giscard d'Estaing. He wanted to articulate how unfair it is that the US can simply print the world's reserve currency, but other states cannot. In the eyes of Europeans, this has led to an inflated standard of living in the USA, at the expense of the rest of the world.

A pearl is worthless as long as it is in its shell.
Native American Proverb

Roach argues that this period is now coming to an end. He expects a crash of the US dollar.[222] Like other economists outside the US, he observes first and foremost the enormous current account deficit of the United States and puts it in relation to the national savings rate: "*The current-account deficit in the United States, which is the broadest measure of our international imbalance with the rest of the world, suffered a record deterioration in the second quarter*."[223]

For the savings rate, however, Roach looks not only at the deposits and savings balances of private households. He also deducts the US's enormous budget deficits and comes to a sobering conclusion. Although the household savings rate has shot up in the pandemic, as opportunities for consumption have been constrained and the government has even sent out checks to households, the overall national net savings rate is negative, for the first time since the Great Financial Crisis of 2007/2008.

Fed policy is endangering the dollar's reserve status.
Stanley Druckenmiller

Roach expects the US trade deficit with the world to widen further and the euro to rise as a result. He expects the Federal Reserve to do little to counter the weakness of the US dollar. In fact, with its switch to "average inflation targeting", the Federal Reserve has given itself the option of letting inflation rise above its 2% target on a sustained basis – to make up for lost inflation, so to speak.[224] The US trade deficit has reached levels we have not seen since the Great Financial Crisis. Roach expects the deficit to continue to grow.

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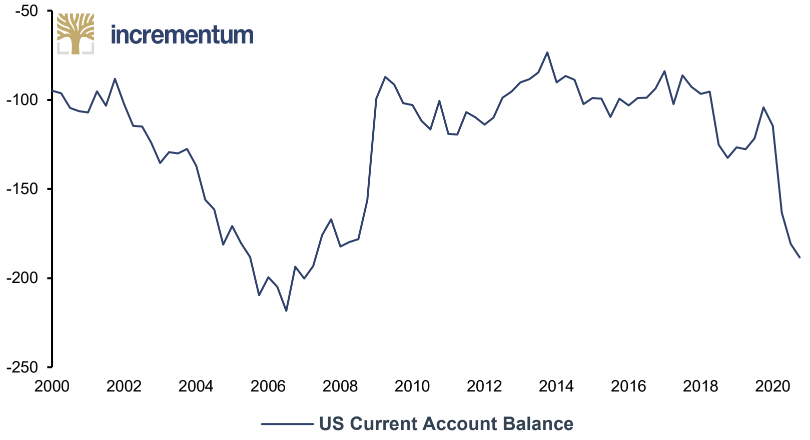
221 Roach, Stephen: "A Crash in the Dollar Is Coming", Bloomberg, June 8, 2020
222 *See* Roach, Stephen: "A Crash in the Dollar Is Coming", Bloomberg, June 8, 2020
223 Shalini, Nagarajan: "The US is facing a dollar collapse by the end of 2021 and an over 50% chance of a double-dip recession, economist Stephen Roach says", *Insider*, September 24, 2020
224 *See* "From inflation targeting to average inflation targeting", Economic Research FRED Economic Data, November 9, 2020

US Current Account Balance, in USD bn, Q1/2000-Q4/2020



Source: Reuters Eikon, Incrementum AG

As of early April 2021, all US Covid-19 aid packages combined amount to about USD 5trn, or nearly a quarter of 2020 US gross domestic product. Roach notes:

> *"While not stimulus in the conventional sense, this fiscal injection breaks all modern records by a wide margin. The domestic saving rate, as a result, should plunge further below zero, putting the already wide current-account deficit under even more intense downward pressure."*[225]

It's a battle of the politicians against the markets. But I'm determined to win the battle.
Angela Merkel

The economist describes himself as a "euro skeptic". But he sees the EUR 750bn recovery fund named "NextGenerationEU", negotiated by Angela Merkel and Emanuel Macron during the Covid-19 crisis, as a decisive step toward a political union, which in turn supports the "*most undervalued major currency in the world*", the euro. Economist and journalist Anatole Kaletsky even spoke of a "Hamiltonian moment" for Europe:

> *"Comparable to the 1790 agreement between Alexander Hamilton and Thomas Jefferson on public borrowing, which helped to turn the United States, a confederation with little central government, into a genuine political federation."*[226]

Stephen Roach considers the US dollar the "*most overvalued major currency in the world*".[227] He expects a correction of about 35% versus other currencies during 2021: "*I don't think this is the end of the US dollar's role as a dominant reserve currency – but it's a step in that direction. I would flag the euro as the number one alternative, also the renminbi, gold and cryptocurrencies.*"[228]

Roach received support at the end of March 2021 from none other than world-renowned US economist Kenneth Rogoff, who published a commentary entitled

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[225] Roach, Stephen: "The Dollar's Crash Is Only Just Beginning", Bloomberg Quint, January 25, 2021
[226] Kaletsky, Anatole: "Europe's Hamiltonian Moment", Project Syndicate, May 21, 2020
[227] "'The US dollar is the most overvalued major currency in the world': Stephen Roach", BNN Bloomberg, March 11, 2021
[228] "'The US dollar is the most overvalued major currency in the world': Stephen Roach", BNN Bloomberg, March 11, 2021

"The Dollar's Fragile Hegemony"[229] In it, Rogoff argues that the appetite for US government bonds – and thus for the US dollar – has been insatiable so far, but that it need not always remain so. Especially not if China modernizes its monetary policy and relaxes its exchange rate regime:

> *"This does not mean that the Chinese renminbi will become the global currency overnight. Transitions from one dominant currency to another can take a long time. During the two decades between World Wars I and II, for example, the new entrant, the dollar, had roughly the same weight in central-bank reserves as the British pound, which had been the dominant global currency for more than a century following the Napoleonic Wars in the early 1800s.*
>
> *Today, it seems to be an article of faith among US policymakers and many economists that the world's appetite for dollar debt is virtually insatiable. But a modernization of China's exchange-rate arrangements could deal the dollar's status a painful blow."*[230]

The Role of Gold

Central banks remained net buyers of gold in 2020, but increasing their gold reserves was clearly not a priority for them. There was little buying, especially in the second half of the year, after Russia paused its gold purchases in April. Compared to 2019, gold purchases by central banks declined by almost 60%, but they were still net buyers. Yet, at only 270 tonnes, purchases were meager.[231] In 2019 they had amounted to almost 670 tonnes.[232]

However, it should not be forgotten that the price of gold reached a record high in the summer of 2020, which increased the metal's importance for central banks' reserves. Russia, which has always set the tone in terms of de-dollarization, now holds around 30% of its reserves in euros – and 22% each in gold and US dollars.[233]

If you ask central bankers, as the World Gold Council did in 2020, why they hold gold, the answers are quite clear. Most relevant are the history of gold as a long-term store of value and the performance of gold in a crisis. However, 36% of central bankers openly stated that de-dollarization is of at least "marginal" relevance when buying gold.[234]

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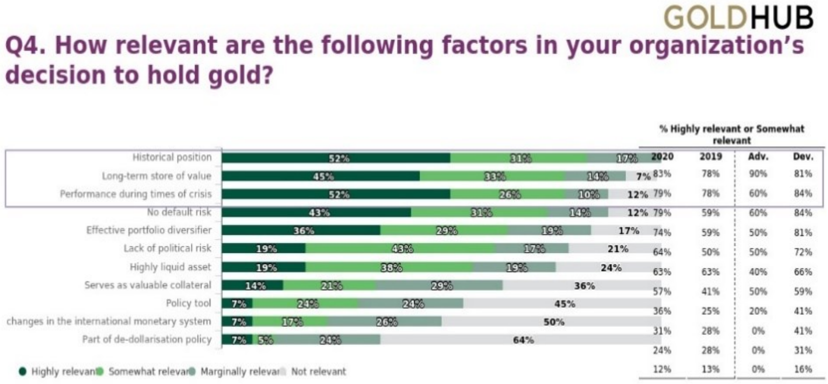
229 *See* Rogoff, Kenneth: "The Dollar's Fragile Hegemony", Project Syndicate, March 30, 2021
230 Rogoff, Kenneth: "The Dollar's Fragile Hegemony", Project Syndicate, March 30, 2021
231 *See* "Gold Demand Trends Full year and Q4 2020: Weak Q4 set the seal on an 11-year low for annual 2020 gold demand", World Gold Council Gold Hub, January 28, 2021
232 *See* "Gold Demand Trends Full year and Q4 2020: Weak Q4 set the seal on an 11-year low for annual 2020 gold demand", World Gold Council Gold Hub, January 28, 2021
233 *See* Golubova, Anna: "Russia's gold reserves surpass its US dollar holdings for first time, says country's central bank", KITCO News , January 12, 2021
234 *See* "2020 Central Bank Gold Reserve Survey", World Gold Council Gold Hub, May 18, 2020



Source: World Gold Council

If you want to know more about why central banks buy gold, you can turn to the Polish central bank. It currently has around 230 tonnes in its vaults, after massive purchases in 2019. In the coming years, a further 100 tonnes are to be added, according to a statement from Warsaw in mid-March 2021.[235] The Polish central bank justifies their increase in gold reserves as follows: "*Gold is the 'most reserve' of reserve assets: it diversifies the geopolitical risk and is a kind of anchor of trust, especially in times of tension and crises.*"[236]

Nie trzeba dowierzać.
(Distrust is the mother of safety.)
Polish proverb

Now, you must know that Poland is not yet a member of the euro and that the euro countries together have more gold than any other currency area, including the US, which always ranks first in national statistics with 8,000 tonnes. **Together, however, the euro countries own 12,000 tonnes, a figure that could grow with each new euro member.** Hungary, as well not a member of the euro area, has not been idle, either, and has recently tripled its gold reserves. The country now holds 94.5 tonnes.

Arrogance diminishes wisdom.
Arabian Proverb

It is also no longer a secret that Europe, Russia, and China see gold as an alternative to the US dollar and have been eyeing the option of launching a new financial system based on gold for decades.[237] When the price of gold rose sharply in the summer of 2020, even Goldman Sachs analysts wrote:

> *"Real concerns around the longevity of the U.S. Dollar as a reserve currency have started to emerge (...) Gold is the currency of last resort, particularly in an environment like the current one where governments are debasing their fiat currencies and pushing real interest rates to all-time lows."*[238]

Against this backdrop, it is highly interesting that voices have also recently been surfacing in the US advising the Federal Reserve or the US government to buy gold as part of the stimulus initiatives that are already underway. In the wake of the Covid-19 crisis, it was hedge fund manager Scott Minerd of Guggenheim Investments who raised this possibility.[239] **But the idea is older and goes back**

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235 *See* "Update 1 – Poland's central bank wants to buy 100 tonnes of gold, governor says", Reuters, March 15, 2021
236 "Poland Wants More Gold", Schiff Gold, March 16, 2021
237 *See* "Europe Has Been Preparing A Global Gold Standard Since The 1970s", Seeking Alpha, July 16, 2020
238 Ainger, John and McCormick, Liz: "Goldman Warns the Dollar's Grip on Global Markets Might Be Over", Bloomberg, July 25, 2020
239 *See* "'Break The Glass' - Guggenheim's Minerd Warns Fed May Start Buying Gold To Support Dollar Hegemony", Corona Stocks, June 8, 2020

to the (highly recommended) 2016 paper “Rumpelstiltskin at the Fed”, by former PIMCO strategist Harley Bassman.[240]

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

In it, he asks why the Federal Reserve – and other central banks – do not simply buy gold to stimulate inflation and the economy. After all, the quantitative easing that has been practiced up until now is often criticized because the money mostly gets stuck in the financial system and does not benefit consumers. Bassman’s proposal, based on stimulus programs from the Great Depression era, calls for the Federal Reserve to offer to buy gold from the public at a price well above the market price. **Bassman cites USD 5,000 as a possible target price. He justifies this proposal as follows:**

> *“A massive Fed gold purchase program would differ from past efforts at monetary expansion. Via QE, the transmission mechanism was wholly contained within the financial system; fiat currency was used to buy fiat assets which then settled on bank balance sheets. Since QE is arcane to most people outside of Wall Street, and NIRP seems just bizarre to most non-academics, these policies have had little impact on inflationary expectations. Global consumers are more familiar with gold than the banking system, thus this avenue of monetary expansion might finally lift the anchor on inflationary expectations and their associated spending habits.*
>
> *“The USD may initially weaken versus fiat currencies, but other central banks could soon buy gold as well, similar to the paths of QE and NIRP. The impactful twist of a gold purchase program is that it increases the price of a widely recognized 'store of value,' a view little diminished despite the fact the US relinquished the gold standard in 1971. This is a vivid contrast to the relatively invisible inflation of financial assets with its perverse side effect of widening the income gap.”*[241]

Of course, the idea of buying gold with freshly printed money to stimulate the economy is not new. Some call it “QE heavy”. True, it does not come up regularly in economists’ circles or in the mainstream media. But in Europe, too, it is talked about again and again. Back in November 2014, for example, then ECB Director Yves Mersch said that the ECB could buy gold as well as bonds to stimulate the economy.[242] And given the unorthodox approach of central banks since the Great Financial Crisis, which has escalated further in the Covid-19 crisis, no idea can simply be wiped off the table.

Why should not the US do what Russia and China have been doing for years, and what Poland and Hungary[243] **and many other smaller countries are doing as well?**[244]

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[240] *See* Bassman, Harley: “Rumpelstiltskin at the Fed”, Allianz PIMCO, April 2016
[241] Bassman, Harley: “Rumpelstiltskin at the Fed”, Allianz PIMCO, April 2016
[242] *See* Spence, Peter: “ECB could buy gold to revive economy”, *The Telegraph*, November 17, 2014
[243] *See* Frost, Natasha: “Gold is good. Gold is strong. Populist governments in Eastern Europe are stockpiling it”, Quartz, October 16, 2018
[244] *See* “Gold Demand Trends Full year and Q4 2020: Central Banks and other institutions”, World Gold Council Gold Hub, January 28, 2021

We believe that both the ECB and the Federal Reserve are ready to buy gold as soon as they deem it opportune – and that the world will be shocked by this move. But even if a gold purchase would strengthen the role of the US dollar, this move to a neutral reserve asset, 50 years after Richard Nixon unpegged the US dollar from gold, would be a clear admission that the US dollar's role as the sole reserve currency is over. This would also strengthen the euro, which is already backed by the world's largest gold reserves.

Perhaps the US will fall back on their legendary pragmatism, skip gold, and go for Bitcoin. Our friend Luke Gromen recently voiced this idea:

> *"If I was working for the US government and they said, 'Luke, what would you do to combat what China and Russia are doing with gold?' It's simple – I'd let Bitcoin run. I would have a harder reserve asset than gold and I would let it run. I would let it be and I would just stand aside, benevolent neglect. And I would let Bitcoin run."*[245]

The concept seems unquestionably exotic. But since the "world war of currencies" is increasingly being fought in the digital arena, nothing should be ruled out. **After all, China also has a digital currency in its quiver. And it is further along than Europe or the USA.**

China's Digital Ambitions

> *"As China (and India) develop electronic, crypto, and peer-to-peer strategies, the epicentre of global economic power could shift.*
> *China is working on a digital currency backed by its central bank that could be used as a soft- or hard-power tool. In fact, if companies doing business in China are forced to adopt a digital yuan, it will certainly erode the dollar's primacy in the global financial market."*
>
> Deutsche Bank

In February 2022, the world will once again be looking to China. That is always the case with sporting events of global significance: The host uses them to present its achievements on the world stage. At the 2022 Winter Olympics, to be held in the capital Beijing and elsewhere, one of these achievements will be the digital renminbi. No other country is further along in developing a central bank digital currency (CBDC) than China. There are several reasons for this.

- China sees the digital renminbi as another weapon in its fight against the dominance of the US dollar in Asia and the world.
- In the long term, China wants to replace the US as the global financial center and "banker to the world".

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[245] "Bitcoin Outlook - Luke Gromen- Swan Signal Live E51", YouTube Channel Swan Signal, February 23, 2021

- The digital renminbi is intended to give the Communist Party of China control over all payment flows and thus help perfect the monitoring of its own citizens.
- The digital renminbi is expected to break the dominance of the two previously used digital payment systems, Alipay and WeChat Pay.
- What is more, the digital renminbi is designed to ward off the threat posed by private currencies such as Facebook's Diem and decentralized currencies such as Bitcoin.

China Continues to Expand Its Role as a Financial Center

Emergencies have always been the pretext on which the safeguards of individual liberty have been eroded.
Friedrich A. v. Hayek

The global Covid-19 pandemic has given a huge boost to digitization in general and, as it looks at the moment, has quite strengthened China. It has overtaken the US as the most important destination for foreign direct investment in 2020. Investments by foreign companies in the US in 2020 plummeted to USD 132bn, a drop of almost 50%, while those in China increased by 4% to USD 163bn.[246] Even the Wall Street Journal has written:

> *"The 2020 investment numbers underline China's move toward the center of a global economy long dominated by the US – a shift accelerated during the pandemic as China has cemented its position as the world's factory floor and expanded its share of global trade."*[247]

It is important to remember that we are talking about new inflows (flow). The amount of total investment in the US (stock) continues to exceed that in China many times over. But: Since peaking at USD 440bn in 2015, US foreign direct investment has fallen every year.

There are two ways to conquer and enslave a country. One is by the sword. The other is by debt.
John Adams

Bond investors are also discovering China. Many are looking east in search of yield. Foreign investors now hold Chinese government bonds worth almost USD 300bn. The PBoC reacted comparatively cautiously to the pandemic when it came to injecting money into the economy. Inclusion in global bond indices has also contributed to the growing appeal of the Chinese bond market, according to Citigroup. The bank's analysts expect inflows of around USD 100bn a year over the next three years.[248]

Of course, the renminbi is also benefiting from growing demand from investors. It has long been known that Beijing wants to strengthen its currency wherever possible. As early as 2009, then central bank chief Zhou Xiaochuan openly complained about the dominant role of the US dollar in the world and called for a reform of the international monetary system.[249] Since then, the Chinese central bank has also been working on its digital currency. After seeing new records in foreign investment and demand for Chinese government bonds in 2020, the PBoC expressed satisfaction: "*The allocation of the renminbi assets by foreign investors will be further facilitated*." And further, "*making it possible for more foreign*

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[246] *See* Goldman, David: "Foreign companies are giving up on the United States and betting big on China, report says", CNN Business, January 25, 2021
[247] Hannon, Paul und Jeong, Eun-Young: "China Overtakes US as World's Leading Destination for Foreign Direct Investment", *The Wall Street Journal*, January 24, 2021
[248] *See* Spratt, Stephen: "This Year Chinese Sovereign Bonds Became a Global Yield Play", Bloomberg, December 7, 2020
[249] *See* Xiaochuan, Zhou: *Reform the international monetary system*, March 23, 2009

central banks and monetary authorities to hold renminbi [assets] as reserve assets."[250]

USD/CNY, 01/2008-05/2021

Source: Reuters Eikon, Incrementum AG

To establish the renminbi as a long-term alternative to the US dollar, Beijing needs to create large and liquid bond markets. And that is exactly what Beijing is doing. True, it has only been seven years since China spooked investors by sharply devaluing its currency. But most analysts do not expect that to happen again and see China and the renminbi as an increasingly attractive place to invest.

China and the renminbi will only remain attractive in the long term if the central bank and government intervene less frequently, liberalize capital markets, and let the market determine the exchange rate. And all of that seems to be in the cards now, if you read the comments of analysts such as Gaurav Mallik, chief portfolio strategist at State Street Global Advisors:

> *"The inclusion of Chinese assets into major bond and equity indices is a very strong indication of the PBoC's intentions around ... the renminbi, and it clearly tells us that the central bank wants to move more towards liberalising its markets."*[251]

It would be wise to assume that the dollar's dominance may not last forever.
Robert Kaplan

Central bank reserve managers are also looking for diversification opportunities and are increasingly turning to China's bonds and its currency. However, the renminbi has not yet fully recovered from the shock of 2015 in terms of its international importance**. Only 2% of global foreign reserves are held in renminbi, while about 60% are held in US dollars and 20% in euros.** The share of the Japanese yen in reserves is also still more than twice as large as that of the Chinese national currency.

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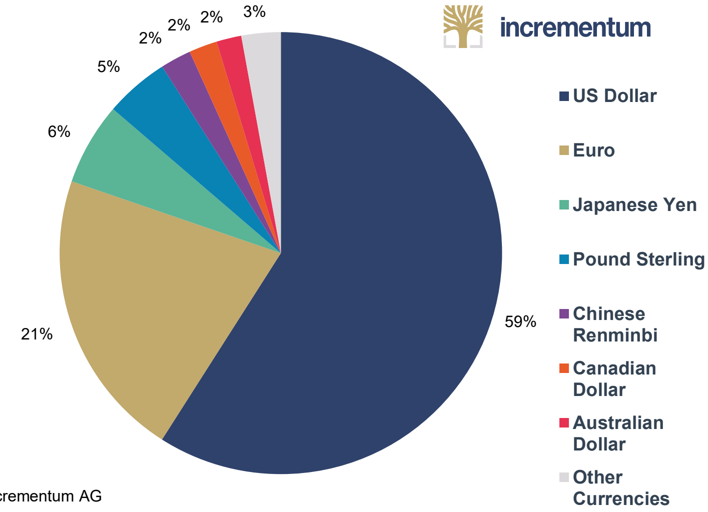
250 "Booming demand for Chinese assets boosts renminbi's global role", *Financial Times*, October 7, 2020
251 "Booming demand for Chinese assets boosts renminbi's global role", *Financial Times*, October 7, 2020

Global Reserve Currency Composition, Q4/2020



Source: IMF, Incrementum AG

What the E-Yuan Could Look Like

Digital mastery is central to Cold War 2 then, and will help decide the victor. But digitisation also poses a viral threat not unlike covid-19: a cyber Pearl Harbor – a crippling attack on critical national infrastructure that could make pandemic shutdowns look benign. This is another gray rhino, and it is surely only a matter of time before such an attack occurs.
Ruffer

China already is a leader in digital payments. In 2019, Chinese used apps to pay for goods and services equivalent to just over USD 500trn. The volume was equivalent to 35 times GDP. By comparison, in the US, digital payments worth only about USD 100trn were made during the same period, which corresponds to around five times GDP.[252]

Cash is now so unpopular in China that the state is using it as a punishment. In late 2020, the state news agency Xinhua reported that a court in the southern Chinese province of Guangdong sentenced more than 2,400 offenders to be barred from all digital payments for five years. They are banned from using apps to make digital payments. Kenrick Davis of Sixth Tone writes:

> *"The punishment is tantamount to social exclusion in a country where mobile payments are employed in every area of life, from public transport to grocery shopping, household bills, health care, and tourism. Leading payment apps Alipay and WeChat are so dominant that the government has had to remind businesses that refusing cash is illegal."*[253]

Pilot e-yuan projects have already been launched in four cities, including the well-known industrial center of Shenzhen. Millions of Chinese were able to register for a lottery to receive one of the coveted red envelopes. These envelopes contained a gift of money in digital form: 200 yuan, which could be used in more than 3,000 stores via a smartphone wallet app.[254] The lottery was also one of the recipes for success in the introduction of Alipay and WeChat Pay, which currently dominate Chinese payment transactions. According to reports from China, the e-yuan will also help to target government funds and protect against corruption.[255]

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252 *See* "Virtual control: the agenda behind China's new digital currency", *Financial Times*, February 16, 2021
253 Kenrick, Davis: "In Cashless China, Criminals Are Punished With Payment App Bans", Sixth Tone, November 12, 2020
254 *See* Kharpal, Arjun: "China hands out $1.5 million of its digital currency in one of the country's biggest public tests", CNBC, October 12, 2020
255 *See* Liao, Rita: "China's digital yuan tests leap forward in Shenzhen", *Tech Crunch*, October 12, 2020

A Digital Coin to Rule Them All?

The e-yuan is the polar opposite of Bitcoin. It was developed, issued, and ultimately mandated by a state. While it is intended to improve the international role and circulation of the Chinese national currency, it is also intended to improve the government's control over its citizens.

Once ascendant, govcoins could become panopticons for the state to control citizens: think of instant e-fines for bad behaviour. They could alter geopolitics, too, by providing a conduit for cross-border payments and alternatives to the dollar, the world's reserve currency and a linchpin of American influence.
The Economist

At the same time, the Chinese leadership is using the e-yuan to put the tech giants Ant Group and Tencent in their place. With Alipay and WeChat Pay, they have helped to largely displace cash in China, but their power is a thorn in the side of the party. This became evident when Beijing prevented the planned IPO of Alibaba's Ant Group at the last second. Jack Ma, the founder of Alibaba and Ant, had dared to criticize the state-owned banks and was severely punished for it.[256]

In practice, Chinese merchants are not forced to support Alipay and WeChat Pay. However, if an e-yuan is declared legal tender, no merchant may refuse it. Nevertheless, contradictions remain, and their resolution is still a long time coming. For example, it is a stated goal of China to use the e-yuan to slowly undermine the dominance of the US dollar. A director of a Chinese state bank is quoted by the *Financial Times* as saying: "*A bigger goal of ours is to challenge the dominance of the US dollar in international trade settlement. But progress toward this will only be gradual.*"[257]

Despite this goal, China has even formed a joint venture with the inherently US dominated SWIFT payment system to push the e-yuan. This new company, called Finance Gateway Information Services Co, is to integrate the digital currency into international systems. One partner in the joint venture is China's Cross-Border Interbank Payment System (CIPS), which was originally founded as an alternative to SWIFT. Now they are working together.[258]

US think tanks and human rights activists have long warned against the control options offered by a digital central bank currency. It is well known that China's leadership relies on control rather than trust vis-à-vis its people. But if the e-yuan is to help spread internationally, the question remains: Who outside China wants to use a currency that allows the Communist Party in Beijing to see every transaction?

Europe Is on Its Way to the E-Euro; the US Is Waiting

Unlike in China, where the government and central bank have long been on course in terms of developing a digital central bank currency, in the West there has so far been only debating, planning, and testing. The goal is still clear, as Augustine Carstens, head of the Bank for International Settlements (BIS), said recently. Carstens compared CBDCs to cash:

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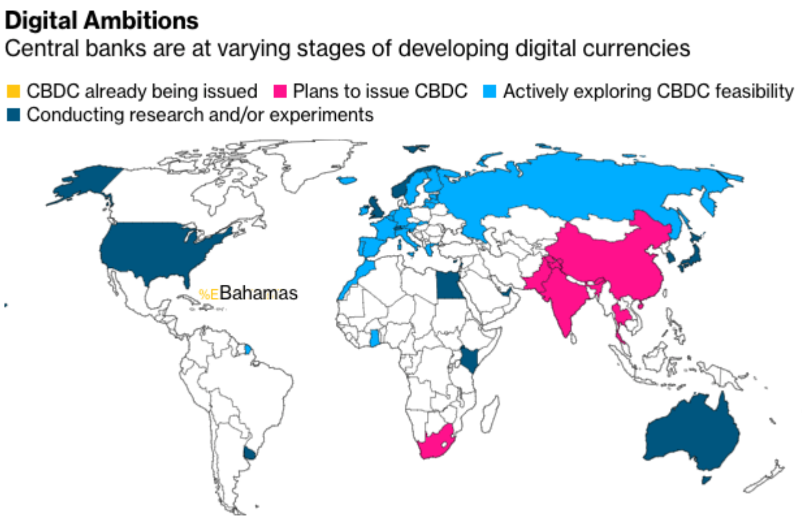
256 *See* "China halts $37bn Ant Group IPO, citing 'major issues'", *Financial Times*, November 3, 2020
257 "Virtual control: the agenda behind China's new digital currency", *Financial Times*, February 16, 2021
258 *See* "Virtual control: the agenda behind China's new digital currency", *Financial Times*, February 16, 2021

"A key difference with CBDC is that a Central Bank will have absolute control on the rules and regulations that will determine the use of that Central Bank liability, and we will have the technology to enforce that. This makes a huge difference to what cash is."[259]

Future's made of virtual insanity now
Always seem to be governed by this love we have
For useless, twisting, our new technology.
"Virtual Insanity"
Jamiroquai

As the following chart from Bloomberg shows, among those central banks that have some form of digital central bank currency on their radar, there are currently three zones, apart from the Bahamas, that have already introduced a digital central bank currency. In Asia and South Africa, plans are already fixed and tests with CBDCs are underway. In Europe and Russia, plans are being prepared and central banks have made it clear that they see CBDCs as the future. In the US, the UK, Australia, and Japan – the core countries of the US dollar bloc – central banks are merely experimenting and see no reason to hurry.



Source: Bloomberg

In the euro zone plans for a CBDC are further along than in the US. ECB President Christine Lagarde makes no secret of the fact that she sees digital central bank currencies as the future. Even as IMF chief, she spoke out in favor of their introduction: "*I think we should consider issuing a digital currency. There has to be a role for the state to supply the digital economy with money.*"[260]

The euro belongs to Europeans and we are its guardian. We should be prepared to issue a digital euro, should the need arise.
Christine Lagarde

After a plan for what the digital euro could look like was unveiled in October 2020,[261] **the consultation process on the digital euro was recently concluded.**[262] The actual decision on whether and how the ECB wants to introduce the digital euro is to be made by mid-2022 at the latest, as Christine Lagarde wants to have introduced the e-euro in four years at the latest.[263] "*It's a technical endeavor as well as a fundamental change. We need to make sure that we're not going to break any system, but to enhance the system",* Lagarde said. And: "*We need to make sure that we do it right – we owe it to the Europeans.*"[264]

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[259] "Central Bank Digital Currencies will grant authorities "absolute control" over money", Gold and Silver UK, March 26, 2021
[260] Hein, Christoph: "Lagarde fordert digitale Währungen" ("Lagarde Calls for Digital Currencies"), *Frankfurter Allgemeine Zeitung*, November 14, 2018
[261] *See* ECB: "Report on a Digital Euro", October 2, 2020
[262] *See* ECB: "ECB publishes the results of the public consultation on a digital euro", April 14, 2021
[263] *See* "Lagarde Says ECB Could Have Digital Currency Within Four Years", Bloomberg, March 31, 2021
[264] Neumann, Jeannette and Lacqua, Francine: "Lagarde Says ECB Could Have Digital Currency Within Four Years", Bloomberg, March 31, 2021

My personal conviction on the issue of stable coins is that we better be ahead of the curve. There is clearly demand out there that we have to respond to.
Christine Lagarde

It is already visible how tough the battle between the ECB and the traditionally cash-loving and skeptical Europeans will be. In addition to the technical implementation, many other questions remain unanswered. At the center is the question of what role the banking system will play if citizens can hold digital money directly in their own wallets. ECB Director Fabio Panetta shocked Europeans in February by announcing that digital balances over EUR 3,000 could be subject to a punitive tax to keep people using the banking system.[265] **The media's response to this announcement was clear: If that is how the ECB is going to go, it might as well not bother.**

This was a classic false start. Which is a shame, because the ECB's logic is sound in itself: When China releases a digital central bank currency, when Facebook tinkers with Diem (aka "Libra"), and when Bitcoin exists, the central bank cannot stand idly by. In October 2020, Panetta gave a speech that did not generate the excitement surrounding his 3,000-euro statement. He stated that a digital euro would be necessary considering changing payment habits:

> *"In particular, it would be needed in the event that citizens become reluctant to use cash as they go digital. This is not the situation we face today: cash is still the most common way of making retail payments in the euro area. However, its role as a payment instrument is diminishing – in some countries rapidly so – as consumers are increasingly paying electronically: as a proportion of all physical retail payments, cash payments decreased from 79% in 2016 to 73% in 2019. This trend has accelerated during the pandemic – with a vast majority of consumers expecting to continue using digital payments as often as they do now, or even to use them more often in the future. And because of this trend, we may see a further increase in the uptake of international card schemes and solutions such as payment wallets and apps developed by large technology firms."*[266]

Against this backdrop, Panetta said, the digital euro is a better way to protect the privacy of Europeans than a privately owned digital payment system ever could be:

> *"A digital euro would increase privacy in digital payments thanks to the involvement of the central bank, which – unlike private suppliers of payment services – has no commercial interests related to consumer data."*[267]

So, there is hope that the ECB will launch a different sort of digital currency than the Chinese leadership has done: a digital currency that protects the fundamental rights of its citizens instead of undermining them. But it is up to Europeans themselves to demand those "features". Panetta knows this: "*The value of money – in both physical and digital forms – is rooted in citizens' trust. Acceptance by the public is crucial.*"[268]

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[265] *See* "EZB-Direktor will digitalen Euro: "Wir müssen dabei sein"" ("ECB Director Wants Digital Euro: "We Must Be Part of It""), *Die Presse*, February 9, 2021
[266] Panetta, Fabio: "A digital euro for the digital era", BIS, speech of October 12, 2020
[267] Panetta, Fabio: "A digital euro for the digital era", BIS, speech of October 12, 2020
[268] Panetta, Fabio: "A digital euro for the digital era", BIS, speech of October 12, 2020

Much Criticism of Central Bank Digital Currencies

While the concept of CBDCS was inspired by cryptocurrencies like bitcoin, the ethos of CBDCS show a stark contrast from the ethos of cryptocurrencies in that they are issued by the state as a centralized form of digital money.
Kraken

The bumpy introduction of the digital euro shows that many questions remain unanswered, and there are fears and concerns. As China's example shows, digital money is a tool that can be used for surveillance. The economic aspects are also problematic. Above all, the idea of some economists that negative interest rates could be enforced with CBDCs – or even "deeply negative interest rates", which Kenneth Rogoff proposes – scares many people.[269]

Rogoff is also considered an opponent of cash, which even now companies use to avoid negative interest rates. Advocates of free choice and cash fear CBDCs will displace cash to make way for even more extreme experiments in the monetary sphere. They see CBDCs as another weapon in the "war on cash".

Another idea that is not going down well with those who are already worried about monetary stability: direct payments to citizens and so-called "helicopter money":

> *"With closer integration of the monetary spigot and the end consumers and businesses, the central bank can much more easily issue credit or just outright cash-outs to the private individuals and commercial entities by simply 'airdropping' new tokens to the existing users. This would lead to disastrous consequences. Economies get easily addicted to central banks' dope."*[270]

The list of unanswered questions and potential conflicts between banks and the population is therefore long. For this reason, Washington sees no reason to hurry and wants to wait and see how the digital experiences of others turn out – probably also because the US dollar is the dominant currency in the world anyway.

The Federal Reserve is currently asking itself whether it needs a digital central bank currency at all. As Federal Reserve Chairman Jerome H. Powell put it in March: "*Does the public want, or need, a new digital form of central bank money to complement what is already a highly efficient, reliable and innovative payments arena?*"[271]

Still, experiments by the Federal Reserve are currently underway in cooperation with the Massachusetts Institute of Technology (MIT): "*The focus really is on developing and understanding the capabilities and limitations of the relevant technologies*", said Powell: "*It's not an attempt to create a prototype.*"[272]

In this context, Powell's assessment of Bitcoin is also of interest, especially when seen in light of Luke Gromen's thoughts, which we have already mentioned: "*It's more a speculative asset, that's essentially a substitute for gold, rather than for the US dollar*"[273], Powell said.

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269 *See* Rogoff, Kenneth: "The Case for Deeply Negative Interest Rates", Project Syndicate, May 4, 2020
270 Forgac, Tomas: "Why Central Bank Digital Currencies Are a Bad Idea", Mises Institute, November 30, 2020
271 Smialek, Jeanna: "Jerome Powell says the Fed won't issue a digital currency without congressional approval", *The New York Times*, March 22, 2021
272 Smialek, Jeanna: "Jerome Powell says the Fed won't issue a digital currency without congressional approval", *The New York Times*, March 22, 2021
273 Smialek, Jeanna: "Jerome Powell says the Fed won't issue a digital currency without congressional approval", *The New York Times*, March 22, 2021

Conclusion: What Is Joe Biden Going to Do?

Since the process of de-dollarization is a gradual, slow one, there is no conclusion to state, except that it will continue. All the trends we have observed in recent years have only been reinforced by the Covid-19 crisis and the response of central banks and politicians. **Fifty years after the Nixon shock, even Saudi Arabia is openly turning toward China – and away from the US dollar.**

So, what is wrong with three world currencies – the euro, the renminbi, and the dollar – sharing the spotlight? Nothing, except that neither markets nor policymakers seem remotely prepared for such a transition.
Kenneth Rogoff

The big, open question is: What will Joe Biden do? We must not forget that he was already confronted with all of this as Barack Obama's vice president. And that under Obama there was a thoroughly constructive phase of rapprochement between East and West on the US dollar issue. We know from Robert Triffin that the "exorbitant privilege" will eventually become a burden – and that it is also in the interest of the US to end the sole dominance of the US dollar at some point.[274] What we do not know is how that transition might proceed and whether it could unfold reasonably peacefully. Biden's government understands that China's digital currency could pose a threat to the dollar - and is keeping an eye on developments. Specifically, they want to know if the digital currency could be a way to circumvent U.S. sanctions.[275] **Which brings us back to Iran.**

This time could be different because while the dollar is still the king of currencies, it is becoming clear that gold is the monarch of money.
Andrew Hecht

A central cornerstone of the negotiations between the US and the rest of the world under Obama was the so-called Iran deal, which was officially about Iran's nuclear disarmament. But the negotiations on this subject were also the only forum in which the US, China, Russia, and the EU could talk about other issues without interference. And talk they did. We know that from John Kerry, then Obama's Secretary of State. When asked in August 2015 what would happen if the Iran deal was scrapped, he replied:

> *"If we turn around and nix the deal and then tell them, 'You're going to have to obey our rules and sanctions anyway,' that is a recipe, very quickly (...) for the American dollar to cease to be the reserve currency of the world."*[276]

As Joe Biden has returned to the Iran negotiating table – although the negotiations are initially only indirect – we can only advise our readers to prick up your ears and read between the lines. **Because in addition to Iran's nuclear program, the future of our monetary system is apparently being discussed in these talks.**

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274 Wikipedia: Triffin Dilemma
275 Mohsin, Saleha: "Bidens Team Eyes Potential Threat From China's Digital Yuan", Bloomberg, April 12, 2021
276 Strobel, Warren: "Dollar could suffer if US walks away from Iran deal: John Kerry", Reuters, August 11, 2015


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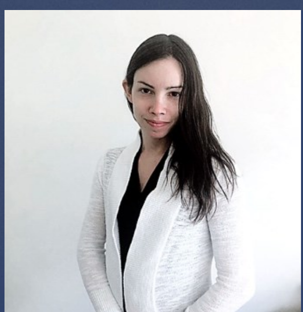
The Long-Term Debt Cycle

"We conclude that the concentration of wealth is natural and inevitable, and is periodically alleviated by violent or peaceful partial redistribution."

Will and Ariel Durant

Key Takeaways

- In the modern fiscal and monetary policy regime, multiple business cycles string together over the decades, compounding into ever higher public and private debt levels and ever lower interest rates, until the zero bound is reached.
- The combination of extremely high debt levels and the impact of policy rates hitting zero or even going slightly negative, sets off a new set of policy tools and pops a long-term debt bubble. This happened in the 1930s through the 1940s, and it happened again from 2008 through the present.
- The key difference between the resolution of a long-term debt cycle and a short-term debt cycle is that long-term debt cycles are often accompanied by a significant currency devaluation to recapitalize the banking system and inflate debt away, while significant sociopolitical shifts occur as well.
- Scarce assets, including precious metals, commodities, and Bitcoin in the modern sense, along with select equities and real estate, are assets that investors can use to navigate the resolution of a long-term debt cycle.



About the author: *Lyn Alden is the founder of* Lyn Alden Investment Strategy, *where she provides retail and institutional investors with research for a variety of asset classes. She emphasizes fundamental investing with a global macro overlay, and her background includes a blend of engineering and finance.*

Introduction

> *"My biggest mistakes in my career came from missing big market moves that hadn't happened in my lifetime but had happened many times before."*
>
> Ray Dalio

When determining the probable path for inflation or deflation deep into the 2020s , it helps to have a map, or some semblance of where we are in history.

Courtesy of Hedgeye

Most investors consider "long term" to be a few decades at most, which assumes that history is relatively linear, consisting of 5–10-year business cycles and nothing more. However, if we zoom out far enough, we can see a much larger cycle, which has been termed by investors such as Ray Dalio to be the "long-term debt cycle".[277] This cycle has occurred throughout history, tied to human nature and the cycle of generations, but modern central banking has further solidified it through an active policy response. **If short-term debt cycles are the heartbeat of industry, long-term debt cycles are the heartbeat of nation states, so their market impacts can be much more extensive when they hit a reversal point.**

The Short-Term Debt Cycle

There is nothing new except what has been forgotten.
Marie Antoinette

Before describing the long-term debt cycle, it will help to remind readers about the context of the short-term debt cycle, also known as the business cycle.

In the middle of an economic expansion, businesses and consumers start to truly recover from the previous recession, and they take on more debt and risk. As the expansion progresses, this higher and higher level of debt and eventual overinvestment (by businesses) and overconsumption (by households) make them increasingly leveraged and fragile. Asset prices generally grow increasingly expensive as the expansion progresses, and overall investment prudence diminishes.

There are three key biases in financial forecasting. Economists never forecast recessions, equity strategists are always bullish, and bond strategists are always bearish.
Albert Edwards

Eventually, some negative catalyst – be it an external or a self-imposed catalyst, such as through initially loose monetary policy followed by tightening of monetary policy – combined with the elevated debt levels, triggers an economic shock and period of deleveraging, which is recessionary. Monetary and fiscal policymakers usually respond by reducing interest rates and injecting fiscal stimulus to offset this otherwise deflationary period; many defaults occur; the system cleans out some of the excesses of malinvestment and unproductive leverage; and then the cycle starts anew.

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277 Dalio, Ray: "How the Economic Machine Works", YouTube, September 22, 2013

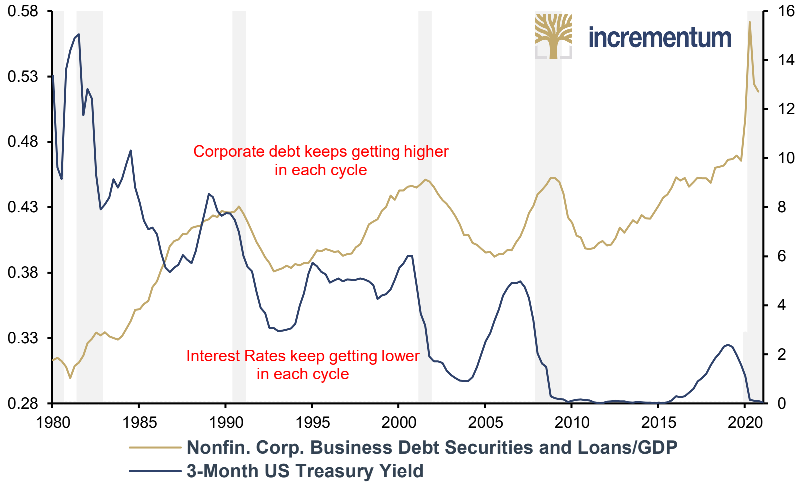
Has the government really established a precedent where it can eliminate the business cycle? History would suggest not.
Dave Rosenberg

There have been myriad debates about how intense the business cycle naturally should be, and whether government and central bank policy smoothes it out or exacerbates it; but few would argue against the observation that society and industry have a natural rhythm to them. Investors and consumers are social beings and tend to flock together.The problem is that the deleveraging that occurs at the end of a business cycle rarely reduces debt levels all the way back to where they started the cycle, in part because of the fiscal and monetary policy response that discourages deleveraging and attempts to smooth over corrective events.

Cycles die; and you know how they die? The Fed puts a bullet in its forehead.
Harley Bassmann

The chart below shows US business cycles over the past four decades. Corporate debt as a percentage of GDP typically decreases after recessions, but has kept making higher lows and higher highs over the decades; and this is in significant part because interest rates have reached lower and lower levels in each cycle and allowed companies to support higher and higher debt levels over time. This trend is driven in part by monetary policymakers.

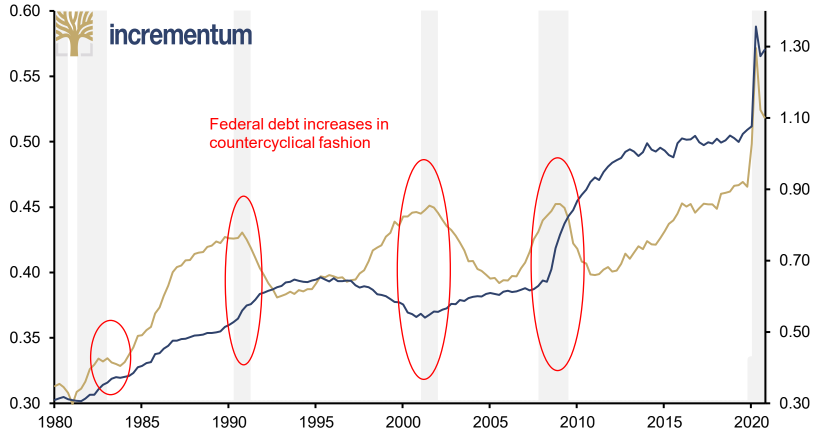
Nonfin. Corp. Business Debt Securities and Loans/GDP (lhs), and 3-Month US Treasury Yield (rhs), in %, 1980-2020



Source: Lyn Alden, Federal Reserve St. Louis, Incrementum AG

Sovereign debt accumulation tends to run countercyclical to this trend. While corporations and households often deleverage after recessions, sovereign debt levels tends to increase during and after recessions, as tax revenues fall because of lower economic output, and government spending increases to finance extra unemployment benefits and stimulus. This Keynesian approach is driven by fiscal policymakers.

Nonfin. Corp. Business Debt Securities and Loans/GDP (lhs), and FederalDebt/GDP (rhs), Q1/1980-Q4/2020



Source: Lyn Alden, Federal Reserve St. Louis, Incrementum AG

And so, history sees a string of business cycles building up public and private leverage over decades, until interest rates can't realistically go any lower, leading to something bigger.

The Long-Term Debt Cycle

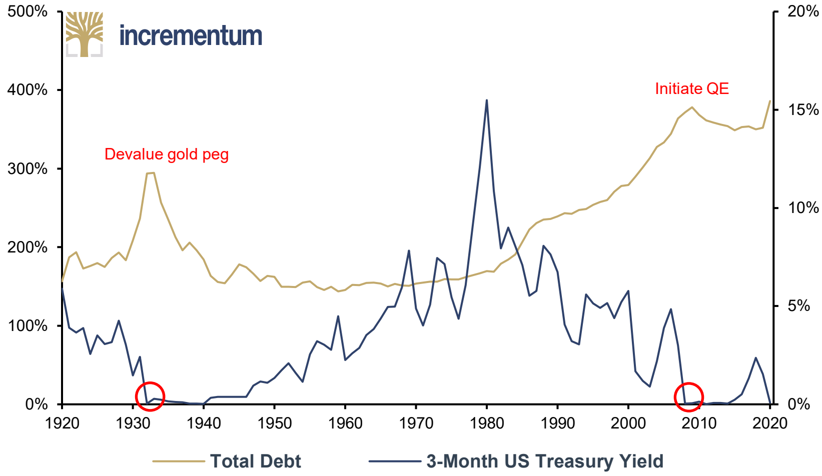
Few people are familiar with the long-term debt cycle, because it only reaches a turning point a couple times per century, and we have to look back into history to see the details.

What is more, history merely rhymes, rather than repeats itself identically, so analysts must take historical data and construct forward probabilities from it based on new conditions and notable differences compared to those past analogues. There are always new variables to contend with.

The lessons and warnings of history are clear if one looks for them, most people don't look for them because most people learn from their experiences and a single lifetime is too short to give them those.
Ray Dalio

After many business cycles accumulate debt from one cycle to the next, to a higher and higher level, total debt in the system (sovereign, corporate, household, and other forms of debt) reaches extremely high levels relative to GDP or the broad money supply, interest rates run into the zero bound, and policymakers have trouble pushing them much below that threshold without dealing a fatal blow to the banking system. **The zero bound is where the magic starts to happen, and things change.**

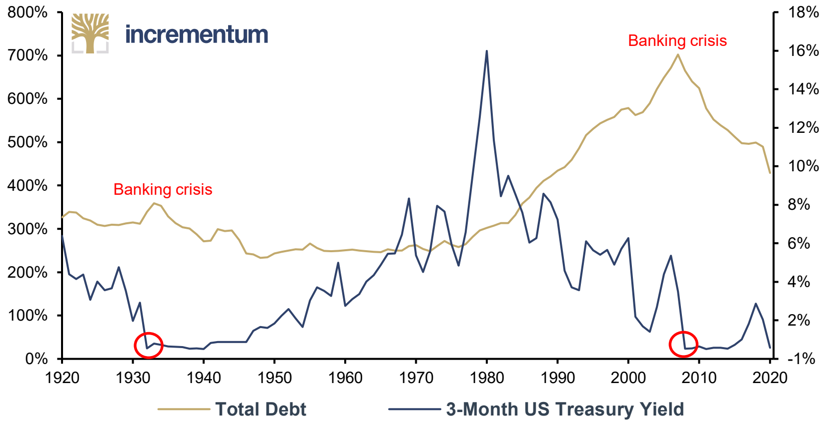
Total Debt (lhs), in % of GDP, and 3-Month Treasury Yield (rhs), in %, 1920-2020



Source: Lyn Alden, Federal Reserve St. Louis, Incrementum AG

There were two long-term debt cycle peaks over the past century in the United States and much of the rest of the developed world. The first one occurred in the early 1930s during the worst stages of the Great Depression, and the second one came in the late 2000s during the Global Financial Crisis. The next chart shows total debt as a percentage of GDP for the United States, which identifies the structural peaks and associated banking crises of each long cycle that occurred right when interest rates hit zero.

Total Debt (lhs), in % of M2, and 3-Month Treasury Yield (rhs), in %, 1920-2020



Source: Lyn Alden, Federal Reserve St. Louis, Incrementum AG

Capitalism stands its trial before judges who have the sentence of death in their pockets. They are going to pass it, whatever the defense they may hear; the only success victorious defense can possibly produce is a change in the indictment.
Joseph Schumpeter

To show it in a different way, the chart depicts the total debt as a percentage of the broad money supply, M2. A normal amount of systemwide debt can be deleveraged nominally. People and businesses pay for their mistakes by losing money in a down cycle, creative destruction occurs, strong businesses devour weak businesses, the dust settles, and the system can build up from there. However, a huge amount of systemwide debt, equal to a few hundred percent of GDP or the money supply, is basically impossible to deleverage nominally, because it annihilates the whole system when deleveraging is attempted, exposes the Ponzi-like nature of how the system is inherently constructed, and creates a vicious cycle leading ever deeper.

Instead, those peaks historically tend to be deleveraged with a major expansion of the money supply. In other words, at the end of a long-term debt cycle, the denominator (currency) goes up a lot more than the numerator (nominal debt) goes down, as policymakers print money to save the system rather than let it collapse.

The Sociopolitical Component

People often blame policymakers for inflationary policies when a long-term debt cycle starts to implode, but that's not when the key mistakes are made. At that point, it's nearly inevitable.

Instead, the key mistakes are made in the decades that lead up to the peak, when more choices are available. There is overuse of monetary policy, which encourages the buildup of debt in the first place and which is usually accompanied by a set of poor fiscal policies. Once debt is built up to an extreme, including at the sovereign level, the options to deal with it are limited. At that point, policymakers have backed themselves into a corner, and face the decision to print money or trigger a revolution, as described in Liaquats Ahamed's book *Lords of Finance: The Bankers Who* Broke *the World*.

There were essentially only 2 ways to restore the past balance between the value of gold reserves & the total money supply. One was to put the whole process of inflation into reverse & deflate the monetary bubble by actually contracting the amount of currency in circulation (…) but it was painful. (…) The alternative was to accept that past mistakes were now irreversible & reestablish monetary balance with a sweep of the pen by reducing the value of the domestic currency in terms of gold (devalue.) The US & UK took the route of deflation; Germany & France that of devaluation/inflation.
Liaquat Ahamed, Lords of Finance

More specifically, someone's liability is someone else's asset. When you default on a liability, you destroy someone's asset. When people and institutions lose assets, they are harmed financially; and if they are leveraged against those assets, they can go bankrupt and their liabilities, which are also someone else's assets, get destroyed as well.

Similarly, when people get laid off from work, that reduces their consumption, which causes other businesses to lose revenue and lay off their employees as well, which further reduces consumption in the system. With a broad default and no fiscal policy response, banks begin to fail.

This vicious cycle of asset price declines, job losses, and bankrupt businesses in turn reduces government tax revenue, because wage income and investment income fall, which, if money-printing to support public debt is not used and a balanced budget is instead maintained, means that either social programs need to be cut, which reduces income to beneficiaries and thus also results in less consumption and tax revenue; or tax rates need to be increased, which takes away excess funds for private investment or consumption; and/or sovereign bonds default, which renders every fractional reserve bank in the country insolvent, because those bonds are their safest assets.

In a healthy system with normal leverage, the natural deleveraging process can play out. The system remains robust and solvent overall, eventually bottoms, and comes out stronger on the other side, with a real market recovery. In that scenario, most banks do not crash, the government is not highly leveraged, only a manageable subset of businesses and households go bust, and the toxix debt does not contaminate the whole system.

The Euro will lead to too many houses in Spain, too many factories in Germany and too many civil servants in France, as each country will end up specializing on their comparative advantages.
Charles Gave, 2001

However, in a highly leveraged system at the peak of a long-term debt cycle, with debt that was only able to reach such extreme levels in the first place due to consistent policy intervention and artificially low interest rates during the preceding decades, a series of initial defaults will trigger a tidal wave of defaults, and it will all collapse like a house of cards, because there is too much debt relative to the amount of money in the system.

So, a hands-off policy approach works quite well in normal deleveraging events, but it historically fails in major deleveraging events, when debt is at extreme levels and even the sovereign entity is highly leveraged. Politicians and central bankers of monetary sovereign nations do not have a career incentive to go down that deflationary collapse path, especially since it was in large part due to their policies hat debt was able to get so high.

MMT threatens to take us down the classic "unorthodox" route do debt reduction, namely via inflation and financial repression.
Dario Perkins

Therefore, a monetary sovereign system rarely if ever reaches that point of collapsing in on itself in a prolonged deflationary spiral, because the reality when trying to deleverage from such a high level is that collective human nature does not allow the deleveraging to go on for long. Even if politicians were to attempt to take the pure austerity route, cut spending programs and let systemwide defaults happen, the economy would get more and more painful; and after a few years, people would vote those politicians out of office in favor of politicians promising stimulus and MMT-like policies more broadly.

Another way of putting it is that a fiat currency regime rarely, if ever, collapses at the end of a long-term debt cycle from a lack of printed money. When the zero bound for interest rates is reached and/or sovereign debt is high and a country runs low on real private buyers of its sovereign debt, it prints whatever fiat it needs to monetize deficits, one way or another. If there is a historically high public and private debt level relative to the number of fiat currency units in the system, the number of fiat currency units in the system is increased. **The currency is the release valve, much to the detriment of savers and bondholders.**

The worst form of inequality is to try to make unequal things equal.
Aristotle

Moreover, socioeconomic factors start to get messy in such extreme economic environments. The peaks of long-term debt cycles tend to also come with peak levels of cronyism and societal wealth concentration, where the gap between the super-rich and everyone else becomes even wider than normal. Money ceases to move around the economy smoothly and reach people of all income levels, and instead just concentrates near the top.

US Gini Coefficient, 1948-2021

Source: chartbookofeconomicinequality.com, worldpopulationreview.com, Incrementum AG

Things fall apart, the centre cannot hold...Mere anarchy is loosed upon the world (...) the best lack all conviction, while the worst are full of passionate intensity.
William Butler Yeats

Populist politics then become more the order of the day; and while some strands of such politics can be quite rational if based on countering prevailing policies that are rightly viewed as needing reform, more dangerous strands begin to emerge as well, particularly if prevailing problems go unaddressed. Policymakers then face the choice of doing something to alleviate the financial burdens of the broad population or risking outright revolution.

In other words, when the top 1% of a population has more wealth than the bottom 90%, politics tend to not be very smooth. Economic growth also tends to be slow and stagnant, since the broad middle class is the engine of the economy.

You can't insure yourself against what you fear, because the more you do so, the more fearful and insecure you become. The result is a form of insanity, looking for total security in a world where security can never, for any individual, be certain.
Oliver Stone

And then there is the national security angle. Economic theories work well in hypothetical, closed-system scenarios, but what about open systems, where international competitors exist? If one country decides to take the bitter medicine and go through a massive, long lasting default and debt collapse and let everything clean out nominally, fair and square, during that whole process they become vulnerable from a geopolitical and military point of view compared to nations that instead choose to intervene with printed money, prop up their economies, and kick the can down the road. **Thus, there is an inbuilt geopolitical incentive for policymakers in fiat regimes to print, when push comes to shove.**

This phenomenon of currency devaluations occurring at the end of long-term debt cycles and periods of heavy wealth concentration goes back thousands of years to Greece and Mesopotamia. **An example from 2600 years ago captures today's situation in an eerily accurate way:**

> *"In the Athens of 594 B.C., according to Plutarch, 'the disparity of fortune between the rich and the poor had reached its height, so that the city seemed to be in a dangerous condition, and no other means for freeing it from disturbances seemed possible but despotic power.' The poor, finding their status worsened with each year – the government in the hands of their*

masters, and the corrupt courts deciding every issue against them – began to talk of violent revolt.

The rich, angry at the challenge to their property, prepared to defend themselves by force. Good sense prevailed; moderate elements secured the election of Solon, a businessman of aristocratic lineage, to the supreme archonship. He devalued the currency, thereby easing the burden of all debtors (although he himself was a creditor); he reduced all personal debts, and ended imprisonment for debt; he cancelled arrears for taxes and mortgage interest; he established a graduated income tax that made the rich pay at a rate twelve times that required of the poor; he reorganized the courts on a more popular basis; he arranged that the sons of those who had died in war for Athens should be brought up and educated at the government's expense. The rich protested that his measures were outright confiscation; the radicals complained that he had not redivided the land; but within a generation almost all agreed that his reforms had saved Athens from revolution."[278]

A One-Two Punch

A long-term debt cycle in the modern banking regime does not typically end with one big bang; it historically ends with a one-two punch. A jab – the private debt bubble – sets up a knockout cross: a public debt bubble.

Adrian: Rocky, why do you fight?
Rocky Balboa: Because I can't sing and dance.

In the first punch, the private debt cycle hits a peak, and a deflationary banking crisis occurs. Money is printed to bail out the banking system, but there is such a big deflationary hole that it does not necessarily show up in the form of broad money-supply inflation or broad consumer-price inflation; rather, it is mainly a matter of bank-reserve or base-money inflation that does not leak out into the broad economy. Meanwhile, consumers and businesses can suffer tremendously, which adds further deflationary pressure on wages and prices.

The three toughest fighters I ever fought were Sugar Ray Robinson, Sugar Ray Robinson and Sugar Ray Robinson. I fought Sugar so many times, I'm surprised I'm not diabetic.
Jake LaMotta

For the second punch, a period of relative stagnation ensues, as the fundamental problems remain in place, even though the banking system was deleveraged, and some semblance of stability returns. However, once this fragile system, with interest rates still near zero, experiences an external shock or rising civil unrest, it leads the population and government officials to shift to very proinflationary policy, or "wartime MMT". Federal fiscal deficits and debt go up rapidly and are monetized by the central bank, which also institutes a policy of financial repression, i.e., it holds interest rates below the prevailing inflation rate, resulting in rapid monetary inflation and the evaporation of big chunks of public and private debt in real terms. **This second punch is outright inflationary.**

Focusing on US history again for this example, we can separate total debt as a percentage of GDP into (1) federal debt and (2) nonfederal debt, mostly consisting of private debt. This shows us the two phases of the long-term debt cycle.

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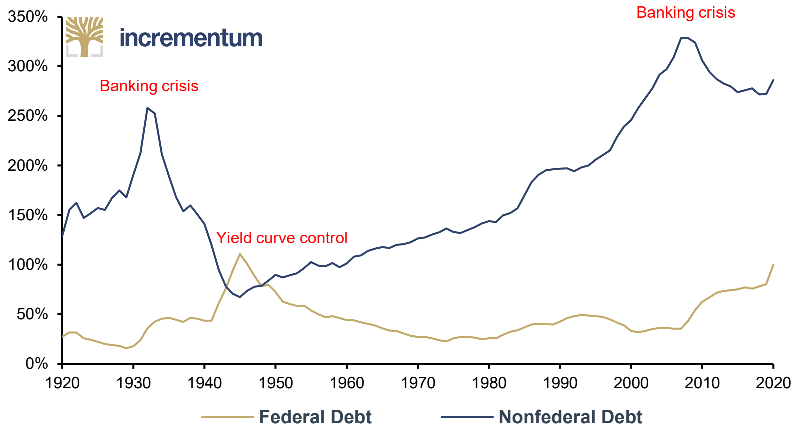
[278] Durant, Will and Ariel: *The Lessons of History,* 1968, p. 55-56

Federal Debt, and Nonfederal Debt, in % of GDP, 1920-2020



Source: Lyn Alden, Federal Reserve St. Louis, Incrementum AG

Printing money is the most expedient, least well-understood, and most common big way of restructuring debts.
Ray Dalio

In the above chart, it appears that nonfederal debt decreased a lot in the 1930s and early 1940s. Indeed, nonfederal debt as a percentage of GDP fell from 225% to 75% from peak to trough, which seems like a huge deleveraging. However, in nominal US dollar terms, nonfederal debt only fell by about 20% from peak to trough during that period.

Instead, along with that partial nominal deleveraging, the US dollar value peg to gold was reduced from USD 20.67/oz to USD 35/oz, which, in combination with some degree of fiscal stimulus and a big expansion of the monetary base, reinflated the broad money supply and nominal GDP and therefore reduced the debt-to-GDP and debt-to-M2 ratios. The numerator (debt) went down 20%, but the denominator (nominal GDP or broad money supply, depending on how you measure it) skyrocketed.

History repeats itself, but in such cunning disguise that we never detect the resemblance until the damage is done.
Sydney J. Harris

The economy improved from its 1932–1933 lows as time moved deeper into the 1930s, but encountered another recession in 1937, which led to more stagnation. Importantly, the economy experienced outright deflation in the early 1930s and sharply shifted into a period of reflation in the mid/late 1930s after the gold peg was reduced and the monetary base was expanded, but the economy did not encounter outright high inflation. This was an antideflationary currency devaluation, meaning that currency was devalued relative to gold, but was not devalued much against broad prices in general, and there was no rapid increase in the broad money supply, since the inflationary forces were counteracting a massive deflationary shock of high debt, high unemployment, collapsing asset prices, and bank failures.

One may say that, apart from wars and revolutions, there is nothing in our modern civilizations which compares in importance to inflation.
Elias Canetti

Then, after a period of stagnation, the US entered World War 2 in December 1941 and began massive deficit spending, monetized by the Federal Reserve and US banking system's buying a lot of US Treasuries. The domestic industrial base nearly tripled during this decade from the trough to the peak, on the back of major deficit spending. To finance this, the Federal Reserve capped all Treasury yields well below the prevailing inflation rate – at 0.375% on the short end, 2.50% on the long end – in order to inflate away part of their purchasing power. Savers and investors in cash and bonds lost a significant percentage of their wealth.

Where the army is, prices are high; when prices rise the wealth of the people is exhausted. There is no instance of a nation benefiting from prolonged warfare.
Sun Tzu, Art of War

War itself was economically subtractive, as irreplaceable lives were lost and expensive equipment was destroyed on foreign soil, half a world away; but the productive infrastructure that the war forced the country to build through federal deficit spending was repurposed for domestic use and was hugely additive in terms of new technology and overall productivity in the peacetime economy. The economy was further boosted by the Servicemen's Readjustment Act of 1944, commonly known as the "G.I. spending bill", which trained and educated millions of soldiers to re-enter the domestic workforce in a highly productive way.

After the war, the federal debt never deleveraged much nominally, but nominal debt was held relatively flat for a while as nominal GDP caught up, partially from growth and partially from inflation, with interest rates capped by the Federal Reserve below the inflation rate.

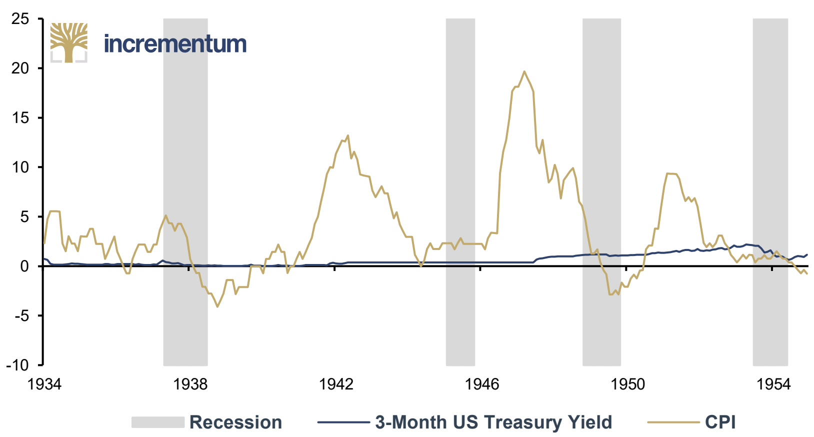
Ground-scraping interest rates turn savers into speculators and quarantined millennials into day traders. They facilitate overborrowing, suppress market signals, misdirect investment dollars, and promote the dubious business of turning well-financed public companies into heavily indebted private ones.
Jim Grant

To reiterate, this era was a period of aggressive spending and currency devaluation, followed by a period of relative austerity that reduced debt as a percentage of GDP, this time at the federal level. **By that point, the long-term debt cycle had been alleviated, but not without significant cost to the currency. In modern parlance, the period of economic stagnation and war forced the 1940s to be a very "MMT-heavy" decade in terms of fiscal and monetary policy**, and the Covid-19 pandemic may be a catalyst to bring the 2020s decade to a similar outcome, especially given the very similar long-term debt situation. In other words, after a period of prolonged stagnation in an overmonetized economy and with a struggling middle class, an external catalyst changes public perception and policymaker perception about fiscal deficits.

The world's longest-dated inflation-linked bond is issued by the UK government; it matures in 2068 and is priced to lose more than 2% of its real value every year – and there are another 47 of those years to go before maturity.
Jonathan Ruffer

In a scenario of massive deficits and financial repression like the 1940s, holders of currency and bonds are effectively defaulted on in real terms – though often not in nominal terms, especially at the sovereign level – and only receive part of their purchasing power back. On the other end, debtors are bailed out in real terms and have to pay back only a portion of the purchasing power that was owed, even though they often pay back the full nominal amount. The next chart shows interest rates vs. the year-over-year consumer price inflation rate during the 1940s and surrounding years.

3-Month US Treasury Yield, in %, and CPI, yoy%, 01/1934-12/1954



Source: Lyn Alden, Federal Reserve St. Louis, Incrementum AG

During this period, three massive inflation spikes occurred, but the short end of the Treasury yield curve was held near zero, and the long end of the curve was held at 2.5%, which led cash and bondholders to lose considerable purchasing power, and allowed the federal government to inflate away a substantial portion of its debt relative to nominal GDP.

Many other countries in the war, both winners and losers who had their productive capacity destroyed rather than expanded, had much deeper and less orderly currency devaluations. **The US had the "best case" version, while many others weren't so lucky.**

This current bubble is different. It is one level higher at the sovereign debt level. Wall Street does not need bailing out. Government balance sheets need bailing out. The question is, by who?
Colly Leporal

The US lacks many of the strengths today that it had in the 1940s. The manufacturing base has been outsourced to a larger degree than that of most other developed nations, and thus the US is more financialized and less industrialized than peers such as Japan or Germany, let alone emerging markets like China or several other countries in Asia.

Plus, the US was the largest creditor nation in the 1940s, meaning that the country collectively owned more foreign assets than foreigners owned US assets. Here in the 2020s, the US is the largest debtor nation, while countries like Japan, Germany, and China are the largest creditor nations.

So, a very MMT-heavy environment in the United States, combined with the US's being a debtor nation and running persistent trade deficits, will potentially make the US dollar one of the most devalued among major currencies in the next cycle.

Conclusion: The Long Echo

> *"So, watch central bankers' actions—i.e., see if they increase their bond buying when interest rates are rising led by long-term interest rates and when the markets and economy are strong—because that action would signal that they are experiencing supply/demand problems."*
>
> Ray Dalio

Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning.
Winston Churchill

Because of where we are in the long-term debt cycle, we have a partial map of where we stand in history that investors can use to navigate the challenging macroeconomic environment. In many ways, the 2010s were a lot like the 1930s, and the 2020s are shaping up to be a lot like the 1940s in terms of fiscal and monetary policy.

The 1930s and 2010s – and the couple years that led up to each – saw private debt bubble peaks, resulting in massive bank failures, asset price collapses, disinflationary pressures, and subsequent antideflationary policies to recapitalize the banks and reinflate the financial system. Overall fiscal stimulus was moderate in these periods; the broad money supply didn't grow particularly fast; and commodity prices and broad consumer prices remained relatively low.

Gold has worked down from Alexander's time (...) When something holds good for two thousand years, I do not believe it can be so because of prejudice or mistaken theory.
Bernard Baruch

The 1940s and 2020s so far, on the other hand, saw massive external shocks to a fragile system, followed up by massive fiscal deficits to support the broader economy, and those deficits were largely monetized. The result was a rapid increase in the broad money supply, which in the 1940s was sustained for several years in a row and led to severe and broad price inflation combined with financial repression. **It remains to be seen what the 2020s will bring, but an inflationary commodity bull cycle seems probable.**

Gold will be repriced once in life; that will be much more than enough.
"Another"

Scarce stores of value, including precious metals, commodities, value stocks, and real estate, historically benefit in this stage of the long-term cycle, which could last all the way through the 2020s decade. Bitcoin is a newer addition to this mix, invented in 2009 during the popping of the long-term private-debt bubble, and so far is also greatly benefiting from how the cycle is playing out.

Gold Storage: Fact Checking Austria, the USA, and the Cayman Islands

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

Simon Mikhailovich

Key Takeaways

- The reasoning behind investing in and holding physical gold revolves around the concepts of trust, security, risk diversification, and hedging against the vulnerabilities of the current monetary system.
- The Covid-19 pandemic has once again highlighted those vulnerabilities. With the massive increase in global indebtedness, the question of wealth preservation has received renewed attention.
- Investing in physical gold is only the first decision. Equally important is the decision about its safe storage.
- 2019 we covered Liechtenstein, Switzerland and Singapore, while in last year's *In Gold We Trust* report we fact-checked New Zealand, Australia and Dubai as storage locations for gold.
- This year we will examine Austria, the USA and the Cayman Islands as jurisdictions for secure gold storage.

Why the Safe Storage of Precious Metals Is More Important Than Ever

> *"If you don't own any gold, buy some. If you own some, buy more. We are going to places where, no matter how much you have, you'll wish you had more. Sadly."*
>
> Grant Williams

The past year's events have highlighted once more the importance of wealth preservation. Given the unprecedented explosion of public debt, further increasing the fragility of the global financial system, gold's role as a trusted investment outside the monetary system has been reaffirmed. The main objective of an investment in physical gold holdings is to serve as a strategic reserve uncorrelated to financial markets and to provide access to liquidity.

The desire of gold is not for gold. it is for the means of freedom and benefit.
Ralph Waldo Emerson

Gold is not dependent upon the global financial system and is one of the few financial assets that is not a liability listed in someone else's balance sheet. Gold exists purely on its own and can rest in a vault silently for centuries, without the necessary daily mark-to-market accounting or financial linkages required for all other financial products. Gold does not require a financial intermediary like a banker or trustee.

Paper money is like dram-drinking, it relieves for a moment by deceitful sensation, but gradually diminishes the natural heat, and leaves the body worse than it found it.
Thomas Paine

The answer to the question of where to best store bullion should hence revolve around considerations of security, trust, risk diversification, and hedging against the worst-case scenarios of the current monetary and political system. While there is no one-size-fits-all solution, different jurisdictions can be compared along measures such as economic freedom, rule of law and enforcement of private property rights, political and economic stability, and historical track record of the country.

This year we will take a closer look at Austria, the USA, and the Cayman Islands as bullion storage solutions. For a deeper look at Switzerland, Liechtenstein, and Singapore as well as New Zealand, Australia, and Dubai, we refer the reader to the previous two *In Gold We Trust* reports.[279]

Austria – The Insider Tip in the Heart of Europe

Let others wage war: thou, happy Austria, marry.
Marriage Policy of the House of Habsburg

Austria, the landlocked East-Alpine country in Central Europe, often finds itself in the shadow of its more glamourous neighbor Switzerland. However, amongst gold investors it is considered an insider tip, as it is one of the few countries where bank secrecy and financial discretion hew to the highest standard. At the same time, it does not have the notoriety and poor media relations of many tax havens. Austria is rarely featured in the global news cycle, with the exception of the international success of its skiers and the annual

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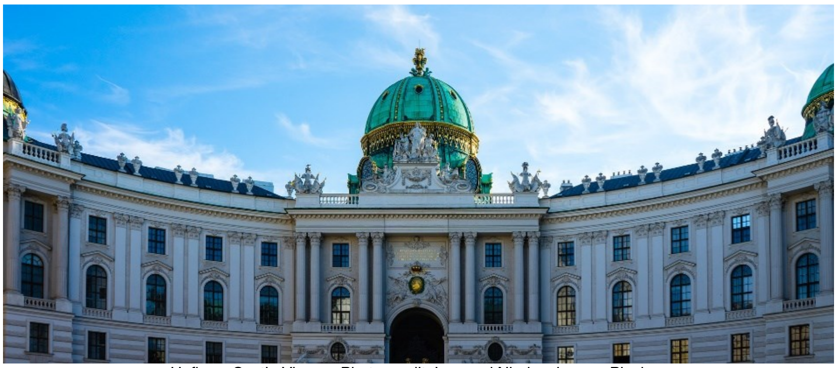
[279] *See* "Gold Storage – Fact Checking New Zealand, Australia, and Dubai", *In Gold We Trust* report 2020; "Gold Storage: Fact Checking Liechtenstein, Switzerland, and Singapore", *In Gold We Trust* report 2019

New Year's concert of the Vienna Philharmonic Orchestra, and yet it is a medium-sized country of almost 9 million people. That discretion, and the high standard of living, make Austria a valuable location to store gold.[280]

Dream on, but don't imagine they'll all come true.
When will you realize…Vienna waits for you?
Billy Joel

Geographically, Austria is defined by the Alps in the west and the Danube River valley to the east. Historically, the Danube provided an important avenue for commerce, connecting Austria and in particular its capital, Vienna, with Central and Eastern Europe. From the 13th to the early 20th century Austria was under the reign of the Habsburg monarchy, and Vienna served as the political and cultural center for all Europe. Following WW1 and the dissolution of the monarchy, the First Republic was created. However, in 1938 it was annexed by Hitler, and only after the defeat of Nazi Germany did Austria regain its independence and establish the Second Republic. In 1955 Austria declared its "permanent neutrality".



Hofburg Castle Vienna; Photo credit: Leonard Niederwimmer, Pixabay

History is constantly teaching, but it does not find many pupils.
Austrian proverb

Today, Vienna remains one of Europe's wealthiest and most culturally sophisticated cities, with almost a quarter of the country's population living there. For the tenth consecutive year, Vienna ranks first globally in quality of urban living according to the Mercer Study, followed by Zurich, Vancouver, and Munich.[281] Oftentimes the Austrian capital serves as the meeting point for world leaders, and many international organizations are headquartered there. Moreover, Vienna serves as one of the four major office sites of the United Nations, hosting, among others, the International Atomic Energy Agency (IAEO) and Unido. It is also the seat of OPEC.

With an economy worth USD 446 bn and a GDP per capita of approximately USD 50,000, the country consistently ranks amongst the twenty richest countries in the world.[282] According to the Human Development Index 2020, Austria ranks 18th.[283] In the years before the Covid-19 pandemic the Austrian government had also made a significant effort to reduce public debt. In 2019 Austria recorded government debt equivalent to 70.4% of GDP, affirming its fiscal conservatism and general risk aversity. However, the Corona pandemic significantly increased the national debt to well over 80% of GDP in a very short period of time.[284]

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[280] We are grateful to Mrs. Andrea Lang (Austrian Mint) as well as Mr. Christian Brenner (philoro EDELMETALLE) for sharing their insights on gold storage solutions in Austria.
[281] *See* "Quality of living - Vienna remains the number one", City of Vienna
[282] *See* IMF: World Economic Outlook Databases
[283] *See* "The next frontier: Human development and the Anthropocen", Human Development Report 2020, UNDP, 2020
[284] *See* "Öffentliche Finanzen im 1. Halbjahr 2020: öffentliches Defizit 9,4%, öffentlicher Schuldenstand 82,6% des BIP" ("Public finances in H1 2020: government deficit 9.4%, government debt 82.6% of GDP"), Statistics Austria

I am not thoughtless but am prepared for anything and as a result can wait patiently for whatever the future holds in store, and I'll be able to endure it.
Wolfgang Amadeus Mozart

Important for gold investors, beyond Austria's renowned financial discretion is the exemption of gold from the VAT, while silver, platinum, and palladium do fall under this tax. In addition, price gains on gold are tax-free for private investors after the speculation period of one year. And Austrians make plenty of use of gold's tax benefit, holding about 486 grams of gold per person on average.[285] In total, about 561 tonnes of gold are privately held in Austria. This is almost double the amount of the gold holdings of the Oesterreichische Nationalbank (OeNB), Austria's central bank, at 280 tonnes.

While there does not exist a local commodity market for gold, Austria is home to one of the oldest and most prestigious mints in Europe, the Austrian Mint (Münze Österreich AG), which can look back on almost 1000 years of history.[286] Today it is a subsidiary of the Austrian Central Bank, minting the beautiful "Philharmonic Coin", which is not only the best-selling gold coin in Europe but also the only one denominated in euros.[287]

Vienna Philharmonic Coin; Photo credit: Jonathan Judmaier, Pixabay

Thus, not surprisingly, Austria is second to none when it comes to the safe handling and storage of gold. There are many private gold vaults and anonymous safety deposit box services, only some of which offer their services on the internet. However, since January 1, 2021, anonymous safety deposit boxes fall under national jurisdiction, following the EU's 5th Anti-Money Laundering Directive.[288] This 2021 amendment to the Accounts Register and Accounts Inspection Act (KontRegG) added to its registry all safety deposit boxes retroactively from January 1, 2015.[289] However, thanks to Austria's solid and proven legal system, it can be assumed that circumvention of banking secrecy will only occur by judicial decree.

Overall, Austria has certainly earned its reputation as one the world's best places to store gold.

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285 *See* Danzer, Andreas: "Österreicher besitzen privat doppelt so viel Gold wie die Nationalbank" ("Austrians privately own twice as much gold as the National Bank"), der Standard, September 29, 2020
286 *See* "Austrian Mint", Münze Österreich
287 *See* "Buying Gold and Silver in Austria", Bullion Exchanges
288 *See* Schnauder, Andreas: "Schließfach in Bedrängnis: Erst der Diebstahl, dann der Zugriff", ("Locker in distress: First the theft, then the access"), *Der Standard*, December 5, 2020
289 *See* "Kontenregister und Konteneinschau", BMF

United States of America – A Superpower Invested in Gold

Safely enclosed by two oceans and blessed with vast natural resources, the United States is a nation of many superlatives: It has the world's largest economy; it dominates scientific research; and it is, by far, the world's foremost military power.[290]

Statue of Liberty; Photo credit: ronale, Pixabay

The foundation for the USA's fantastic success dates back to 1787, when its supreme law, the Constitution of the United States, was created. Establishing the legal framework for the constitutional presidential republic, it enshrines individual liberties and limits government powers. Today it is considered to be the oldest written and codified national constitution in force.

We hold these truths to be self-evident: that all men are created equal; that they are endowed by their Creator with certain unalienable rights; that among these are life, liberty, and the pursuit of happiness.
Declaration of Independence

As a land of opportunity, the US attracted an unprecedented influx of migrants from all around the globe. Already in 1890 the young nation had become the world's most productive economy, overtaking the British Empire.[291] Rapid economic development around the turn of the 20th century spurred innovation and productivity. Despite severe economic setbacks such as the Great Depression and involvement in both World Wars, the American economy returned to a golden era of growth, expanding by an average of 3.8% per year from 1946 until 1973.[292] One important factor that is still influential today was the US's leading role in designing the Bretton Woods agreement and establishing the US dollar as the world's reserve currency.[293] **Pivotal for the US's becoming the monetary hegemon was its massive gold holdings, which amounted to 20,000 metric tonnes in 1940, or roughly 60% of the world's monetary gold.**[294]

The US was as a founding member of some of today's most important institutions, including NATO, the United Nations, the World Bank, the International Monetary Fund, and the Organization of American

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290 We are grateful to Simon Mikhailovich (The Bullion Reserve) for sharing his knowledge and deep insights on the gold market and bullion storage in the US.
291 *See* "The United States Becomes a World Power", Digital History
292 *See* "Money Income of Households, Families and Persons in the United States: 1987", Current Population Report, Series P-60, No. 162, U.S. Department of Commerce, February 1989
293 *See* chapter "A Brief History of Gold Confiscations" in this *In Gold We Trust* report.
294 *See* Bernstein, Peter: *The Power of Gold: History of an Obsession*, 2000; Green, Timothy: "Central Bank Gold Reserves", World Gold Council, Research Study No. 23, November 1999

States. At the same time, the US carefully used its wealth and geographic advantages to build up the world's largest navy, to strategically control the major sea lanes around the globe and thus control global trade.[295] With a military budget of USD 738bn, today the US accounts for more than a third of global military spending.[296] In light of its geographical advantages – the United States is an unparalleled geographic fortress – a conventional military invasion appears highly unlikely. A greater risk stems from the possibility of a cyber-attack.

What is American strategy first of all? So American strategy is to command the seas, right? The foundation of our power is sea control. Nobody can invade us, but we can invade them.
George Friedman

Overall, the United States is an obvious place to safely store your wealth. Today, the American economy is worth a staggering USD 21trn, with an estimated GDP per capita of USD 63,000.[297] Not only is the US home to some of the world's largest companies, it also houses the two largest stock exchanges, the New York Stock Exchange and Nasdaq. Naturally, it has one of the most liquid precious metal markets, too. While London still has the largest OTC gold market, the US-based Comex Gold Futures Market (CME group) saw daily trading volumes around 20mn ounces of gold per day in 2020.[298] Easy market access and high liquidity are amongst the most important factors for any gold investor.


New York City Skyline; Photo credit: Leonard Niederwimmer, Pixabay

Too many of us look upon Americans as dollar chasers. This is a cruel libel, even if it is reiterated thoughtlessly by the Americans themselves.
Albert Einstein

However, the US is not the largest gold producer. That title goes to China, followed by Russia and Australia. The US comes fourth, with approximately 200 tonnes of gold mined every year, accounting for about 6.4% of the world's supply.[299] Similarly, private gold ownership is less prevalent amongst Americans than it is, for example, amongst Indians or Swiss. The latter are said to own an average of 598 gram per person, which is more than five times the amount of gold held by the average US citizen.[300] Meanwhile, the US has the largest official gold holdings in the world, amounting to 261.5mn oz. or more than 8,300 tonnes.[301]

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295 *See* Stratfor Worldwide Profile United States
296 *See* "Chapter Two: Comparative defence statistics", *The Military Balance*, Vol. 121, February 24, 2021
297 *See* "Report for Selected Countries and Subjects: October 2020", International Monetary Fund, October 2020
298 *See* "Gold - Volume", CME Group
299 *See* "Top 10 Gold Producing Countries", U.S. Global Investors, September 23, 2020
300 *See* Wikipedia Commons: Gold Reserves
301 *See* "Status Report of U.S. Government Gold Reserve", Bureau of the Fiscal Service, March 31, 2021

Who controls the food supply controls the people; who controls the energy can control whole continents; who controls money can control the world.
Henry A. Kissinger

When it comes to storage and safe keeping of gold, the United States is actually a middling nation. While there are many storage options for coins and bullion, due to the US's sheer size and the resulting competitive marketplace, they primarily serve American citizens, who prefer to store their gold in close proximity to home. In contrast to the practice in many European countries, anonymous gold purchases are very unusual. The US government requires the reporting of cash transactions exceeding USD 10,000 via Form 8300. However, as the use of cash in general is increasingly uncommon and companies are liable for the reporting of any transaction that could be considered "unusual", anonymous gold purchases are rare.[302] Thus, while the US comes with the big advantage of direct access to one of the most liquid markets, amongst non-American citizens it is rarely named as the number one gold storage location. Even other countries, including Germany, that stored their gold in the US in the aftermath of WW2 have largely repatriated their gold.

The confidence of the entire global financial system rests on the U.S. dollar. Confidence in the dollar rests on the solvency of the Fed's balance sheet. And that solvency rests on a thin sliver of …gold.
James Rickards

Certainly, one point often brought up in the context of secure storage is the USA's well-known and sordid history of gold confiscation in the 1930s.[303] Clearly, this is a risk to always consider when choosing a bullion storage location, albeit today the risk of physical gold confiscation is low by historical standards, as gold's role within the monetary system has fundamentally changed. Today, gold serves only as a reserve for central banks and has not had any direct significance in the monetary system since the closing of the gold window on August 15, 1971.

Globally, the US nevertheless ranks amongst the top jurisdictions for physical gold storage. And as of today, it is unparalleled for its liquid, transparent, and deep marketplace for trading bullion.

Cayman Islands – Gold Storage on the Sunny Side

> *"The Cayman Islands is a sleeping giant of the financial markets."*
>
> Mark Yaxley

The Cayman Islands are a Caribbean archipelago largely unknown to many people outside the ultra-wealthy. While the three islands score high with their spectacular beaches and excellent scuba diving, this British Overseas Territory has established itself foremost as a highly ranked financial center of the international business community. Think of the Caymans as a sunny, 21st-century version of Jersey or the Isle of Man.[304]

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302 *See* "Sarbanes-Oxley Act" (2002) and "Dodd-Frank Wall Street Reform and Consumer Protection Act" (2010)
303 *See* chapter "A Brief History of Gold Confiscations" in this *In Gold We Trust* report.
304 We are grateful to Mark Yaxley from Strategic Wealth Preservation for sharing his knowledge on gold storage solutions on the Cayman Islands.


Grand Cayman; Photo credit: drtechfuchs, Pixabay

Located halfway between Cuba and Honduras, the three islands, Grand Cayman, Little Cayman and Cayman Brac, are the peaks of a submarine mountain range named Cayman Ridge, which extends from Belize to Cuba and constitutes the northern margin of the Cayman Trough. The trough is not only the deepest point in the Caribbean Sea but also part of the tectonic boundary between the North American Plate and the Caribbean Plate. **With a total land surface area of 264 km², the islands are only slightly larger than the city of Amsterdam.**


Photo credit: wikimedia

But in truth, should I meet with gold or spices in great quantity, I shall remain till I collect as much as possible, and for this purpose, I am proceeding solely in quest of them.
Christopher Columbus

Their first sighting dates back to 1503, when Christopher Columbus, on his fourth voyage to the New World, was thrust westward and eventually spotted the smaller two of the three islands. Due to their large tortoise population, they were simply called Las Tortugas, Spanish for *turtles*.[305] Only later was their current name established, derived from the Carib Indian word for marine crocodile, *caymanas*.

Following the Treaty of Madrid in 1670, Jamaica and some Caribbean islands including the Caymans were ceded to Great Britain. In 1863, the islands officially became a dependency of Jamaica before, 100 years later, in 1962 and following Jamaica's independence from Great Britain, they reverted back to British rule. Today, they are a self-governing British Overseas Territory, with the UK retaining responsibility for military defense and foreign relations. **The head of state is the ruling British monarch, Queen Elizabeth II.**

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305 *See* "First Sighting of the Cayman Islands", Cayman Islands Government

This close link to Great Britain, with the application of British rule of law, is one of the main reasons the Caymans have become a favored offshore domicile amongst banks, hedge funds, and other financial firms. Moreover, 40 out of the world's 50 largest banks are registered there.[306] This is further testament to the worldwide recognition of the Caymans' financial sector. The 123 banks licensed in Caymans are split into A and B classes, with the former licence permitting banks to carry out local as well as international business. There are currently 9 Class A banks in the Cayman Islands, with six of those offering retail services. The other 114 banks hold Class B licenses and are mostly restricted to offshore transactions with non-residents.[307] In addition to the banks, there are more than 110,000 companies registered in the Caymans today, a number that is almost double the islands' population.[308] In the past year alone, there were 11,000 new company registrations.

Islands are natural workshops of evolution.
Richard Dawkins

Along with their proven legal track record, the Caymans are renowned for their favorable tax policies. Since the 1985 abolition of the annual CI$10 head tax on all male residents, direct taxation has been totally absent.[309] There is neither an income tax, a company or corporation tax, an inheritance tax, a capital gains tax, or a gift tax.[310] The situation is especially interesting for gold investors, as precious metals are exempt from income or export tax, and no sales or storage tax is levied. Instead, most of the Cayman Islands government's income comes from indirect taxation. Overall, the Cayman Islands government, as well as its population, distinguish themselves with their strong appreciation for the financial services sector, of which they are highly protective, allowing it to thrive.[311]

Today, the financial services sector, together with high-end tourism, constitute the two main pillars of the Cayman economy, estimated to be USD 5.5bn in 2020. Not only does that figure translate to a GDP per capita of over USD 70,000, it also generates an exceptional annual fiscal surplus of more than USD 100mn. In the past the Cayman Islands government has never relied on budget support from the British government. However, because of the disruption in tourism caused by the Covid-19 pandemic, government revenue is expected to slightly decline.[312]

Of special relevance to precious metals investors from the US in particular is the islands' proximity: a one-hour flight from Miami. Furthermore, with English being the official language, there is no language barrier. Already, there is more than USD 700mn worth of bullion stored in private storage facilities.[313] Furthermore, clients can rely on the already existing, sophisticated security infrastructure while market makers inside the vaults provide easy access to the international markets.

Moreover, if one's gold wealth is used as an insurance allocation in combination with a much larger financial portfolio of stocks and bonds, then having the bullion domiciled in the same place as the financial investments can be prudent, as it can

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306 *See* Ebanks, Elizabeth Pat: "Cayman Islands", Encyclopedia Britannica
307 For more information *see* Cayman Islands Monetary Authority: Banking Services Statistics Overview
308 *See* "Company Register Statistics", Cayman Islands General Registry
309 The Cayman Islands Dollar (KYD) has been pegged to the US dollar at 1.2 since 1974
310 *See* Cayman Islands Government: "Our Finance & Economy"
311 *See* Yaxley, Mark: "Gold and Silver Storage Offshore in the Cayman Islands", YouTube, January 2, 2019
312 *See* "The Cayman Islands' Economic Assessment and Stimulus Plan", Economics and Statistics Office, May 2020
313 *See* Strategic Wealth Preservation

be used for loans, collateral, or even leverage in those investments. Thus, while the Caymans may not have the same historical track record in gold storage as, for example, Switzerland, they certainly show great potential. In addition, they allow for a great vacation when visiting the vaults. **There is good reason that the Caymans have been added to the list of top bullion storage locations in the world.**

Conclusion – Choosing the Right Strategy

> *"Only physical gold uniquely combines inverse correlation to confidence, complete independence from the financial counterparties, and global liquidity under all market conditions."*
> Simon Mikhailovich

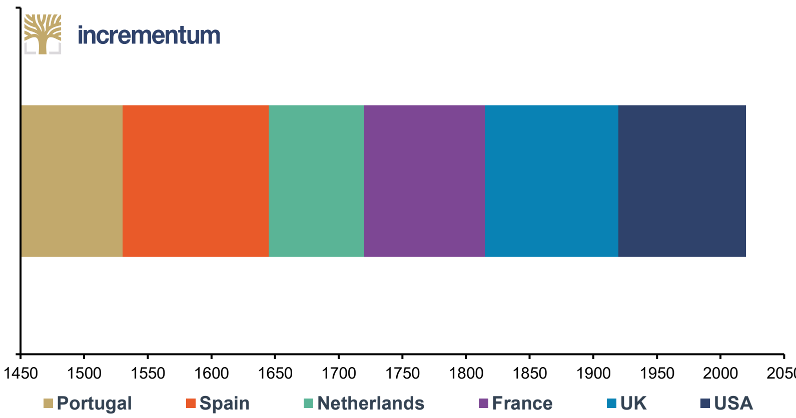
Diversification is the only free lunch in finance.
Harry M. Markowitz

In the quest of wealth preservation and protection against systemic risks, physical gold has proven to be an excellent option. Not only does the precious metal combine a unique set of properties, including scarcity, independence from the financial system, high liquidity, and high durability, as well as a high diversification value to other investments, gold holds an unrivaled track record of over 5,000 years.

Capital is agnostic. That is one of the truisms of the system under which we live. All capital cares about are security and getting the best return.
Jim Rogers

By comparison, the lifespan of currencies is rather finite. Contrary to the prevailing notion that currencies are permanent, they certainly are not. Rarely does one exceed a lifespan of 150 years. On average, they last only 27 years. The median lifetime is even lower, at 15 years.[314] For companies, life expectancy is not much different. Today, the average life of a S&P 500 company is at approximately 20 years.[315] Thus gold continues to be the most ideal asset for wealth preservation and protection. It exists purely on its own, and can rest in a vault silently for centuries without expiration or decay.

Global Reserve Currencies, since 1450



Source: JP Morgan, Hong Kong Monetary Authority, Erste Group Research, Incrementum AG

[314] *See* Mack, Chris: "Is This Time Different for the Dollar?", Financial Sense
[315] *See* Hillenbrand, Philipp et. al.: "Traditional company, new businesses: The pairing that can ensure an incumbent's survival", McKinsey & Company, June 2019

I do not think it is an exaggeration to say that history is largely a history of inflation, usually inflations engineered by governments for the gain of governments.
Friedrich A. v. Hayek

The choice of a secure storage location is therefore of crucial importance. Taking into consideration geopolitical risks and jurisdictional peculiarities, as well as the counterparty's trustworthiness, the final determinant is oftentimes the investor's personal situation as well as location. As was revealed during last year's disruptions caused by the coronavirus outbreak, geographic proximity and direct access to a liquid market can prove highly valuable.

Austria ranks very high with its long track record in gold mintage and bank discretion. The Cayman Islands are a premium jurisdiction outside the US while still within easy travel distance. The USA is a dominant storage location with its size and access to the most liquid and transparent precious metals marketplace.

While the future will always remain uncertain, developing a deep understanding of a jurisdiction's advantages and disadvantages facilitates strategic decision making regarding safe bullion storage.

A Brief History of Gold Confiscations

"Whenever destroyers appear among men, they start by destroying money, for money is men's protection and the base of a moral existence.

Destroyers seize gold and leave to its owners a counterfeit pile of paper."

Ayn Rand

Key Takeaways

- **Gold confiscation events are omnipresent in history. Gold has been a desirable object throughout human history. And governments have repeatedly sought to obtain the precious metal from their citizens.**
- **Many methods of gold confiscation exist, from simply declaring the ownership contraband to cancelling financial contracts or even expropriating gold by force.**
- **The US alone can look back on four instances when private gold ownership was denied. Other famous examples occurred in Nazi Germany, Australia and Great Britain.**
- **Today, gold (officially) is no longer money; paper money now takes that role. Consequently, the risk of confiscation is much lower.**

Introduction

> *"But when you recall that one of the first moves by Lenin, Mussolini and Hitler was to outlaw individual ownership of gold, you begin to sense that there may be some connection between money, redeemable in gold, and the rare prize known as human liberty."*
>
> Howard Buffett

Gold confiscation constitutes the ultimate horror scenario for every gold investor – especially given people's powerlessness in the face of this kind of threat. There are many ways gold can be confiscated: (1) The redeemability of gold-backed banknotes or bank deposits may be suspended; (2) gold clauses may be declared invalid; (3) restrictions on private gold ownership may be legislated; (4) gold ownership may be declared illegal. The nature and types of gold confiscation are manifold, but each one is a form of theft.

To evaluate the risk of gold confiscation in the 21st century, we shall examine some recent examples from history and highlight the common patterns and motivations for gold confiscation by government authorities. From these patterns we can make calculated predictions about the likelihood of bullion or gold futures or ETFs being confiscated in the next decade.

In the game of life, survival is only part of the battle.
Gad Saad

All valuable things are subject to theft, and gold is no different. In fact, gold may have been the single largest target of theft and confiscation over the millennia. Gold has been stolen by pirates, thieves, and governments for thousands of years. Most remarkable, however, is gold's resilience against theft. The ease of transport, small size, and immutability of gold has given the "little guy" a strong defense against wealth confiscation by the Goliaths.

That gold is no longer considered money by governments today is in gold's thousand-year history the biggest difference from earlier times. All the historical episodes of gold confiscation have occurred when governments desperately wanted to raise money and thus confiscated gold as a means to that end. Today governments and central banks do not have a strong incentive to confiscate gold, because it is not considered money or part of the fiat monetary system.

Historical Episodes of Gold Confiscation

The country most often mentioned in the context of gold confiscation is the USA, with four well-known episodes of gold confiscation:

- **War of 1812:** invalidation of gold clauses, closing of mints
- **Civil War (1861-1864):** physical confiscation, invalidation of gold clauses
- **Great Depression (1933):** physical confiscation, imprisonment
- **Nixon's suspension of Bretton Woods (1971):** non-redeemability of USD

But the USA is not unique. Recent confiscations have occurred in other parts of the world, including Australia, Germany, Great Britain and South Korea. On a positive note, in each episode the confiscation was temporary, and gold re-emerged as a financial instrument, often decades later, without a loss of value.

The War of 1812

Photo credit: wikipedia.org

In 1776, the Americans experimented with paper money called "continental dollars" to finance the American Revolution. While the revolution succeeded, continental dollars did not and in less than 3 years fell to less than 1/40 of their face value and were soon abandoned.[316] Subsequently, the expression "*not worth a continental*" became an iconic American idiom.

Facing a similar fiscal emergency in 1812, the US declared war on Britain after Britain introduced a series of trade restrictions to impede US trade with France. Only 30 years removed from its War of Independence from Britain, the young government looked for a creative way to raise money.

If willing to help, of all existing states they are the best able; for they have abundance of gold and silver, and these make war, like other things, go smoothly.
Thucydides

So, in 1812, the government chartered for the first time a central bank to give birth to the first US Treasury notes (US T-bills), which are so ubiquitous today. These bonds would be used to finance this war. In order to sweeten the appetite for these new T-bills, the government suspended the gold and silver clauses contained in bank notes. This severing of contractual liability provided private banks with protection from bank runs and bankruptcy due to fractional reserve lending.

This act by government was the first episode of gold confiscation in the USA. While citizens' physical coins were not confiscated, their claims on gold, held through paper money and lending contracts, were vaporized. Citizens could no longer collect on their gold "IOUs".

Furthermore, to impede the circulation of gold coins as a medium of exchange, the government mint stopped striking new coins. While it was legal to deposit gold coins or bullion with a bank, their withdrawal was suspended. As a consequence, throughout the war period coins became increasingly rare. Today's high numismatic value for coins from this period reflects this scarcity.

Militarily, the War of 1812 ended with a ceasefire, and the national mood was marked by a sense of national unity, almost euphoria, and is often dubbed *The Era of Good Feelings*. Beating back the British Empire for a second time gave the USA a sense of invincibility. The credit bubble formed by the unlimited T-bills also provided a short-term economic high. Eventually inflation surged, and monetary responsibility returned after 2 decades. In 1834, the Central Banking Charter was revoked, and gold redeemability of paper money was restored. However, the redeeming level was slightly lower, at USD 20.69/oz. compared to the earlier level of USD 19.39/oz., or a loss of 6% and a long 22 years.

[316] Newman, Eric P.: *The Early Paper Money of America*, 1967, p. 16

The American Civil War, 1861–1864

Photo Credit: National Numismatic Collection, National Museum of American History

Only half a century later, the immorality of slavery gave rise to the American Civil War, pitting the Southern plantation owners against the industrial Northern States. Once again, rapidly mounting war expenses compelled both sides in the war to suspend gold and silver convertibility and resort to financial chicanery. The Civil War constitutes the second instance in American history of gold confiscation. Gold was not uniquely singled out for wealth confiscation. During the Civil War, all valuable property was subject to confiscation, including land, factories, and equipment. Ironically, a formal law was passed to “legalize theft”. In fact, the government made it a crime to not take property and confiscate all valuable assets of enemy citizens – particularly with an angle of freeing the agricultural assets known as slaves. **The Confiscation Act of 1861 compelled the government to confiscate the private property of its citizens – including gold and silver – without a judicial process or review.**[317] While enforcement of the confiscation was more politically motivated and tactical than uniform, confiscation was still ubiquitous.

The military battles of the Civil War ended in 1865, but convertibility to gold was not restored for another 14 years. Only in 1879 was the price of an ounce of gold restored to exactly its pre-war level of USD 20.69/oz. The US dollar was once again back on a gold standard, having been severed twice already. Citizens had lost access to their gold reserves for two decades, but did not suffer any financial loss.[318] For the next 54 years the USA was on a gold standard, which was reaffirmed under the Gold Standard Act of 1900.

The Great Depression and FDR’s Executive Order

I, Franklin D. Roosevelt, President of the United States of America, do declare that said national emergency still continues to exist and pursuant to said section do hereby prohibit the hoarding of gold coin, gold bullion, and gold certificates within the continental United States.
Franklin D. Roosevelt

Given that two major wars, the War of 1812 and the Civil War, had caused the US government to eliminate gold claims, it may seem surprising that it did not resort to the same technique during World War 1. But unlike most European belligerents, who suspended gold redeemability during World War 1, America did not. In fact, the newly established Federal Reserve System attracted vast quantities of European gold looking for a safe harbor.[319]

Only in 1933, with the inauguration of President Franklin Delano Roosevelt (FDR), did this change. The Great Depression had taken its toll on the global economy. The US was deeply divided, unemployment was high, and trust in the banking system was crushed when FDR declared a one-week banking holiday, with only half the banks reopening after the “holiday”. Jeff Christian estimates that 30% of all the wealth in the US was stored in gold at that time, or about 54mn ounces.[320] In comparison, today this number is approximately 1% of American wealth.[321]

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317 *See* Wikipedia: Confiscation Act of 1861
318 *See* Elwell, Craig K.: “Brief History of the Gold Standard in the United States”, Congressional Research Service Report for Congress, June 23, 2011
319 The Federal Reserve was originally established on a gold standard, and it is worth noting that the onset of war did not inevitably led the US government to gold confiscations.
320 *See* Christian, Jeffrey: “Politics and Gold – The Lessons of 1933”, CPM Group, December 4, 2020; Christian, Jeffrey: “Hot Topic #13: Gold for Grownups! Jeff Christian debunks the myths of the market.”, Macro Voices, April 7, 2020
321 *See* “Above-ground stocks”, Gold Hub, February 1, 2021; “Why wealth matters. The Global wealth report”, Credit Suisse, October 2020, own calculations


The New York Times.

ROOSEVELT ORDERS 4-DAY BANK HOLIDAY, PUTS EMBARGO ON GOLD, CALLS CONGRESS

Photo Credit: Twitter.com: New York Times OTD, March 6, 2019

I can assure you that it is safer to keep your money in a reopened bank than under the mattress.
Franklin D. Roosevelt


POSTMASTER: PLEASE POST IN A CONSPICUOUS PLACE.—JAMES A. FARLEY, Postmaster General

UNDER EXECUTIVE ORDER OF THE PRESIDENT

Issued April 5, 1933

all persons are required to deliver

ON OR BEFORE MAY 1, 1933

all GOLD COIN, GOLD BULLION, AND GOLD CERTIFICATES now owned by them to a Federal Reserve Bank, branch or agency, or to any member bank of the Federal Reserve System.

Executive Order

For Further Information Consult Your Local Bank

GOLD CERTIFICATES may be identified by the words "GOLD CERTIFICATE" appearing thereon. The serial number and the Treasury seal on the face of a GOLD CERTIFICATE are printed in YELLOW. Be careful not to confuse GOLD CERTIFICATES with other issues which are redeemable in gold but which are not GOLD CERTIFICATES. Federal Reserve Notes and United States Notes are "redeemable in gold" but are not "GOLD CERTIFICATES" and are not required to be surrendered

Special attention is directed to the exceptions allowed under Section 2 of the Executive Order

CRIMINAL PENALTIES FOR VIOLATION OF EXECUTIVE ORDER $10,000 fine or 10 years imprisonment, or both, as provided in Section 9 of the order

Secretary of the Treasury.

Photo Credit: wikipedia.org

Shortly after FDR's banking "holiday", in April 1933 he issued a seemingly benign order in which he offered to purchase private gold at the fair market value of USD 20.67/oz. This order was however not a voluntary offer, but compelled citizens to turn in their gold or face imprisonment. FDR did not steal or confiscate private gold as an emperor might, nor did he suspend the convertibility of paper money. Instead, he compelled citizens to relinquish their gold under the threat of penalty.

While the Second World War was still some years ahead, FDR and his advisors needed funds immediately to promote their progressive agenda and fiscally spend their way out of the Great Depression. **FDR understood that gold was money, and he knew where the money was located.**

Under Executive Order 6102, signed on April 5, 1933, anyone living in the US – citizen or foreigner – was required to turn in all gold bullion, gold coins, and gold certificates to the government before May 1, 1933 with the permission for any person to keep up to USD 100 in gold coins, which at a price of USD 20,67/ounce amounted at that time to almost 5 ounces.[322] The same applied to businesses and corporations. Nevertheless, compliance with this executive order was low, and it is estimated that only 30–50% of the gold bullion and coins was turned in.[323]

Official statistics record that USD 571mn in US gold coins was in circulation in January 1933. By January 1934, this number had been reduced to USD 287mn. So presumably USD 284mn in coins had been brought to the government in compliance with *Executive Order 6102*. According to Milton Friedman, the monetary authorities attributed the unreturned USD 287mn portion to loss, destruction, exportation, and numismatic collections.[324] Friedman argues that this official explanation is not sufficient to explain the large amount remaining in circulation, and suggests that most of the USD 287mn had been retained illegally in private hands.

Some of this "illegal" gold was stashed away or sent overseas, where gold trading was not prohibited. We know that after 1974, when coin shops were allowed to open again, gold coins that were dated 1933 or earlier were still available. This is unequivocal proof that there were many citizens who did not comply with the executive order.

An Act to protect the currency system of the United States, to provide for the better use of the monetary gold stock of the United States, and for other purposes.
Official title of the Gold Reserve Act

On January 30, 1934, roughly eight months later, FDR signed the *Gold Reserve Act*. This required all gold held by the Federal Reserve to be handed over to the US Treasury. Effectively, this was a confiscation from a nonpolitical branch of the government, the Federal Reserve, to the political executive branch, the US Treasury. With the Gold Reserve Act, FDR obtained full custodial control of all gold assets in the USA and could use the gold for his fiscal spending projects. His excuse for such a brazen act was: "*Since there was not enough gold to pay all holders of gold obligations, … the Government should in*

322 *See* "Executive Order 6102—Requiring Gold Coin, Gold Bullion and Gold Certificates to Be Delivered to the Government", The American Presidency Project, UCSB, April 5, 1933
323 Nabers, Jeff and Chongchua, Phoebe:*5 Steps to Freedom: How to Cut Your Dependence on Institutions and Escape Financial Slavery*, 2009; Friedman, Milton and Schwartz, Anna: *A Monetary History of the United States, 1867-1900*, 1963
324 Friedman, Milton and Schwartz, Anna: *A Monetary History of the USA 1867-1960*, 1963

the interest of justice allow none to be paid in gold".[325] And henceforth all gold clauses in financial contracts were suspended.

You know I am a juggler, and I never let my right hand know what my left hand does … I may have one policy for Europe and one diametrically opposite for North and South America. I may be entirely inconsistent, and furthermore I am perfectly willing to mislead and tell untruths if it will help win the war.
Franklin D. Roosevelt

Upon signing the Gold Reserve Act, FDR reset gold parity to USD 35/oz., a rise of almost 70% from the previous level of USD 20.67/oz. With a full corner on the gold holdings in the US, FDR could practically fix the price of gold without dissent. The remaining owners of gold made out like bandits through this decree, with the US government being the biggest winner of them all. Gushing with financial resources, the government could engineer the economy out of the Depression.[326]

Also, many foreign owners of gold saw the opportunity for windfall profits and converted their gold holdings into US goods. As a result, in the period from 1930 to 1935, US Treasury holdings of gold tripled to 9,000 tonnes, with a further doubling to 20,000 metric tonnes by 1940 – largely due to the inflows of foreign gold.[327] **This massive hoard, about 60% of the world's monetary gold[328], was pivotal in the US's becoming the world hegemon after World War 2.**

The enforcement of Executive Order 6102 was, as already mentioned, more bark than bite. On September 26, 1933, a New York lawyer named Frederick Campbell wanted to withdraw his substantial gold holdings of 160kg, which he had deposited at Chase National Bank. When Campbell tried to withdraw the gold, Chase refused, and Campbell sued Chase. A federal public prosecutor then indicted Campbell for failing to surrender his gold. Ultimately, the prosecution of Campbell was unsuccessful; however, the authority of the federal government to seize gold was upheld.[329] In the end Campbell's gold was seized.[330]

The emergency banking legislation passed by the Congress today is a most constructive step toward the solution of the financial and banking difficulties which have confronted the country. The extraordinary rapidity with which this legislation was enacted by the Congress heartens and encourages the country.
William Woodin, Secretary of the Treasury, March 9, 1933

In addition to the Campbell case, there are four famous and compelling cases, referred to as "the gold clause cases", which came before the US Supreme Court to question the validity of the series of actions that had begun with President Roosevelt's Executive Order 6102 of April 5, 1933. In all four cases, the Supreme Court, which FDR threatened to pack with loyalists, narrowly upheld restrictions on the possession of gold. Apart from the prominent prosecution cases during the period May 1933–April 1934, the issue of enforcement faded. We know from the low compliance rate with Executive Order 6102 that the prosecutions were more an exercise in monetary theater than a serious attempt to seize all private gold. **In other words, it was a typical fast, sloppy heist.**

All in all, just a few principled gold owners filed lawsuits against the US government, alleging a breach of constitutional rights regarding their property, life, liberty, and pursuit of happiness and professing that Executive Order 6102 violated certain mandates. **As a historical reference point, not one of those lawsuits against the government was ever decided in the plaintiff's favor.**

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325 *See* Thornton, Mark: "Gold Policy in the 1930s", Independent Institute, May 1, 1999
326 Also *see*: "Real Conversations: The New Great Depression w/ Jim Rickards", HedgeyeTV, January 15, 2021
327 *See* Green, Timothy: "Central Bank Gold Reserves: An historical perspective since 1845", Research Study No. 23, World Gold Council, November, 1999
328 Bernstein, Peter: *The Power of Gold: The History of an Obsession*, 2000
329 *See* "Campbell v. Chase Nat. Bank of City of New York, 5 F. Supp. 156 (S.D.N.Y. 1933)", Justia US Law, November 16, 1933
330 *See* "Judiciary: Gold Indictment No. 1", *Time*, October 9, 1933

Prediction, not narration, is the real test of our understanding of the world.
Nassim Taleb

In 1961, President Dwight D. Eisenhower expanded the prohibition on private gold ownership to US citizens living abroad, and President John F. Kennedy banned ownership of pre-1933 gold coins.[331] **Gold remained prohibited as a holding in the USA until 1974, when President Gerald Ford finally repealed FDR's executive order, and Nixon's temporary suspension made gold irrelevant.**

The gold standard did not collapse. Governments abolished it in order to pave the way for inflation…Solemn pledges were broken, retroactive laws were promulgated, provisions of constitutions and bills of rights were openly defied. And hosts of servile writers praised what the governments had done and hailed the dawn of the fiat-money millennium.
Ludwig von Mises

Even though the executive order was repealed in 1974 and the freedom to own gold was restored as a legal right, a provision of the Federal Reserve Act was retained that allowed the Secretary of the Treasury to require people to surrender their gold at the Treasury's discretion in times of war. Under Executive Order 11825, President Gerald Ford repealed FDR's Executive Order 6102 and legalized the private ownership of gold coins, bars and bullion again. This right is codified in Publ. L 93-373: *"to permit United States citizens to purchase, hold, sell, or otherwise deal with gold in the United States or abroad"*. However, this legislation also states that

> *"(c) The provisions of subsections (a) and (b) of this section shall take effect either on December 31, 1974, or at any time prior to such date that the President finds and reports to Congress that international monetary reform shall have proceeded* ***to the point where elimination of regulations on private ownership of gold will not adversely affect the United States international monetary position."***[332]

Moreover, this law did not repeal the Gold Repeal Joint Resolution (1933), and thus all financial contracts that specified gold as a payment method remain outlawed. That is, only gold contracts using gold as a commodity, rather than a form of money, are legal.

So, it is arguable that the Federal Reserve already has a legal pathway to confiscate private gold holdings in the future, without a new presidential executive order being required. The historical lesson is that a government will confiscate private gold if it believes it serves its interest, regardless of what the law says.

Today, Executive Order 6102 is considered the most notorious episode in the history of gold confiscation. It was not confiscation at the point of a gun, but its cunning deceptiveness was likely more successful than a brazen robbery would have been.

We have gold because we cannot trust governments.
Herbert Hoover

Our modern monetary system and the reserve status of the USD are a direct result of FDR's policies to obtain gold. It is worth considering that without FDR's Executive Order 6102 and the subsequent Gold Reserve Act of 1934, the USA would never have accomplished the Bretton Woods agreement post-World War 2. Keynes might have succeeded with the Bancor Monetary System, and the US dollar might not be the world's reserve currency. The legacy of FDR's gold confiscation is ever-present with us today.

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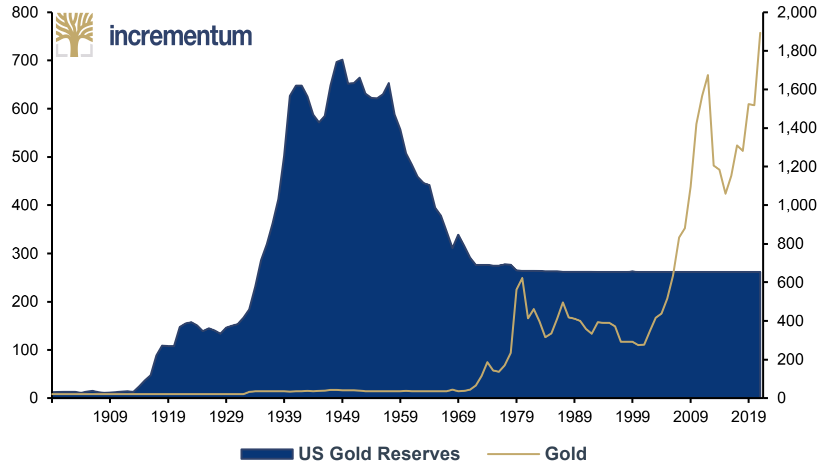
331 *See* "Das Goldverbot in den USA" ("The gold ban in the USA"), Goldseiten.de
332 "Public Law 93-373", emphasis added

US Gold Reserves (lhs), in Moz, and Gold (rhs), in USD, 1900-2020



Source: Nick Laird, goldchartsrus.com, Reuters Eikon, Incrementum AG

Bretton Woods Confiscation (1971)

Congress has power expressly to prohibit and invalidate contracts, although previously made and valid when made, when they interfere with carrying out any monetary policy Congress is free to adopt.
Supreme Court of the United States

The final episode in American gold confiscation can be considered as an epilogue to FDR's actions beginning in 1933. While World War 2 still raged, a new international monetary order was worked out amongst 44 countries under the lead of John Maynard Keynes (British Treasury) and Harry Dexter White (US Treasury). The 1944 Bretton Woods Agreement was to become the foundation of the post-World War 2 monetary system, making the US dollar the reserve currency of the world.

Under this Bretton Woods Agreement, all currencies had a fixed exchange rate against the US dollar, while only the US dollar was backed and redeemable in gold. This extra layer of intermediation in the valuation of all other currencies gave the US dollar a pre-eminent role, i.e., reserve status. The US gold reserves provided backing as a store of value, but gold itself did not play a role as an instrument of monetary exchange. **The massive 20,000 metric tonnes of gold accumulated by the US Treasury provided confidence in the Bretton Woods framework, and a chance for it to succeed.**

Source: WAVE 3 News, October 25, 2019

And in the beginning, it did succeed. But as the US dollar's money supply expanded, some countries began to worry that the US would not be able to fully meet its redemption obligation. A US dollar banknote that embodied a claim to gold, and was therefore gold, would then become merely a green-printed piece of denim. The pressure increased as France and Germany, among others, pushed to redeem their US dollars for physical gold. Increasingly, they began draining Fort Knox[333] of its 20,000 tonnes of gold. This prompted US President Richard Nixon to "temporarily" suspend the redeemability of the US dollar on August 15, 1971. **Technically equivalent to confiscating gold from foreign governments, this "temporary suspension" of convertibility is still in force today, some 50 years later.**

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[333] While there are three storage sites, Fort Knox, Westpoint and the vaults of the Federal Reserve in New York, the bulk of the gold was stored in Fort Knox.

Although this 1971 levitation of fiat currencies was met with outrage and anxiety, the Bretton Woods monetary system of free-floating currencies continues unabated today. The monetary system did not collapse, and in an ironic twist, it is now legal for US citizens to own gold again. Once gold was officially not considered money anymore, private ownership was quickly legalized in 1974.[334] A round trip for FDR's gold confiscation had finally ended 41 years later with the complete removal of gold from the monetary system.

Other Gold Confiscations

Photo credit: wikimedia.org

Gold has suffered confiscations all over the world. In 1935, Italian "duce" Benito Mussolini launched the "Gold for the Fatherland" initiative, requesting the "donation" of gold jewelry, including wedding bands. In return for their donation, Italian wives received a steel wristband engraved with the slogan "Gold for the Fatherland". In Rome alone, more than 250,000 wedding rings were collected.[335] These "donations" amounted to over 35 tonnes of the precious metal, which at the time was equivalent to around USD 39mn. One has to wonder what the penalty was for not wearing such a steel wristband in place of a wedding band.

Photo credit: wikipedia.org

A few years later, the German Nazis set out to conquer Europe and confiscate the gold of their neighbors on their way. It is said that Adolf Hitler himself did not have much appreciation for the yellow metal, writing in his book *Mein Kampf*, "*It may be that today gold has become the exclusive ruler of life, but the time will come when man will again bow down before a higher god*." His confidants Hjalmar Schacht (president of the Reichsbank, later economics minister) and Hermann Goering (commander in chief of the Luftwaffe) strongly believed in the metal, though.[336,337] The former of the two even had published a book called *Gold for Europe,* in which he explained:

> *"With all peoples and at all times gold has always been a welcome means of exchange, and it was possible to acquire all other goods in current commercial use with gold long before rulers and governments took control of the monetary system by legal measures."*[338]

With a thorough understanding of gold, these men saw how important gold was to finance their war efforts. Not to mention that previously Schacht had been instrumental in establishing the Bank for International Settlements (BIS) to handle reparation payments after World War 1. Schacht was well versed in banking issues, and with majority of gold being held at central banks, those became an obvious target for the National Socialists, resulting in the theft of some 600 tonnes of gold in the course of just six years.

In 1938, when the National Socialists annexed Austria, Hitler, Schacht and Goering had already prepared to confiscate the gold stored at the Austrian Central Bank in Vienna (about 78 tonnes),[339] worth approximately USD 100mn, and to

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334 "H.R. 6912 (93rd): A bill to amend the Par Value Modification Act, and for other purposes", p. 352, September 21,1973; "31 USC § 442", United States Statutes at Large, Volume 88, 93rd Congress, 2nd Session, p. 445, August 14, 1974
335 Biagi, Enzo: *Storia del fascismo*, Vol. 2, Sadea-Della Volpe Editori, Firenze, stampa Milano, 1964, p. 291
336 Hitler, Adolf: *Mein Kampf*, Vol. 2, chapter 2, December 11, 1926
337 Taber, George: *Chasing gold: The Incredible Story of How the Nazis Stole Europe's Bullion,* 2016
338 Taber, George: *Chasing gold: The Incredible Story of How the Nazis Stole Europe's Bullion*, 2016
339 *See* Oesterreichische Nationalbank: The central bank during the Third Reich

issue a government order conferring the bank's administration to the German Reichsbank. Furthermore, the German Reichsmark was then declared legal tender in Austria. The timing of this annexation was important, as the finances of the Nazis had been drained by excessive spending.

There is a very good reason that Vladimir Lenin, Joseph Stalin, Mao Ze Dong, Adolf Hitler, Maximilian Robespierre Pol Pot, Benito Mussolini, Kim Jong II, and many other notorious criminals all ruled in periods of unsound government-issued money which they could print at will to finance their genocidal and totalitarian megalomania.
Saifedean Ammous

One of the Nazis' next targets was the stealing of Czech gold worth USD 97mn.[340] Czechoslovakia had accumulated a significant amount of gold from its citizens in the years prior, under the donation campaign "Gold Treasure of the Czechoslovak Republic", in order to strengthen the country's currency, the Czechoslovak koruna. It is reported that Czechoslovakia's gold reserves amounted to 95 tonnes in 1938.[341] A large part of the assets was held at the Bank of England.

In a rather clever move, a message, allegedly from the Czech central bank, was sent to the BIS, requesting the transfer of bullion from one BIS account to another, both of which were with the Bank of England (BoE) but with the latter being managed by the German Reichsbank. It is said, that the National Socialists stole more than 45 tonnes of Czechoslovak gold. While the exact number is unknown, the Tripartite Commission recognized most of the Czechoslovak claim (44 tonnes) as the basis for the restitution proceedings.[342]

They have now outlived their usefulness. The essential condition for maintaining confidence in our currency is a Government determined to maintain the right monetary and fiscal policies. That we shall do. It is right to give an additional degree of freedom to allow the pound to operate in the world unrestricted by restraints of this kind.
Geoffrey Howe

Another gold seizure took place in 1959, when the Australian government wanted to introduce the Australian dollar as a free-floating currency into the Bretton Woods system. To prevent their citizens from using gold as money during this period of monetary transition, the government seized all private holdings of gold. **Under Press Release No. 29, gold seizures from private citizens were made legal.**[343] Only 17 years later this order was suspended, precisely when Nixon broke the US dollar's link to gold.[344]

A few years later, in 1966, gold ownership in Great Britain came under threat when the British government panicked about the declining value of the British pound.[345] The Labour government was nationalizing entire industries and wanted to seize private wealth for their socialist programs. The government limited the private ownership of gold to a maximum of four coins weighing 7.3 gr each and confiscated the remainder. Moreover, minting gold coins was declared illegal. This action, like the one in Australia, was rescinded in 1971, corresponding exactly with Nixon's suspension of gold in the Bretton Woods Agreement.

During the Asian financial crisis of 1977, South Korea defaulted on its IMF loans, and the government started the so-called "Gold Collection Campaign", asking its citizens to contribute their jewelry and gold bullion to help pay the debts. This appeal to national pride created a staggering result, with a total of 230 tonnes donated to the government. Today this amount is worth approximately USD 15bn.

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340 *See* "A history of a Gold Confiscation", visually.ly by rockcontent
341 Kubu, Eduard: *Czechoslovak Gold Reserves and their Surrender to Nazi Germany*, The London Conference, pp. 245 – 248.
342 *See* Kubu, Eduard: *Czech Republic: Czechoslovak gold reserves and their surrender to Nazi Germany*, 1997
343 *See* "History of Gold Controls in Australia", January 30, 1976
344 *See* Clark, Jeff and Maloney, Mike: "Gold & Silver Confiscation: Can the Government Seize Assets? – Transcript", February 7, 2017
345 Great Britain already a suspension of gold redeemability from 1797–1821 (Restriction Bill) after a loss of confidence triggered the drowning of its gold reserves.

Strangely, a program based on voluntary donations can harvest more in gold confiscation than one based on government coercion.

Photo credit: Prakashon, Priya: "Narendra Modi's Gold Monetisation Scheme: All you need to know about it", india.com, November 5, 2015

Today, the perhaps most sophisticated confiscation of gold is taking place in India. In 2015 Prime Minister Modi began a Gold Monetization Scheme (GMS), wherein citizens are offered incentives of free storage, about 2% interest, and attractive loan offers on their private gold holdings. The gold can be of any form, including bullion, coins or jewelry. The only requirement is that the gold must be physically stored with the State Bank of India (SBI), India's central bank. In 2020, Indian citizens placed approximately 4 tonnes of gold with the SBI, and under the GMS program the SBI has collected over 13 tonnes or USD 730mn since 2015.[346]

However, the amount collected by the GMS is a tiny fraction of the total private gold holding in India, which is estimated at a staggering 25,000 tonnes.[347] This probably the largest private hoard of gold in the world. In addition to the GMS program, the Modi government also makes it difficult for citizens to purchase new gold, which is subject to normal VAT and a special gold excise tax. The excise tax was raised to 12.5% in 2019 but this immediately brought legal gold purchases to a halt and increased smuggling.[348]

Gold, though of little use compared with air or water, will exchange for a great quantity of other goods.
David Ricardo

Unlike in most Western countries, gold is the most common way for Indian citizens to store their wealth. In 2021, the gold excise tax was reduced to 7.5% in 2021, and legal gold purchasing in India restarted. The Modi government also have very tight restrictions on importing gold, even measuring the weight of your jewelry (which you are wearing) when you fly into India. For example, a man is allowed 20g, and woman 40g before paying a 36% duty tax.[349] Moreover, the Police can legally confiscate any personal gold holdings over 100g for a male, 250g for and unmarried woman, and 500g for a married woman without due process.[350]

The pattern of gold confiscation around the world is clear: When a government finds itself in a monetary crisis, it will attempt to confiscate private wealth. Long-standing traditions and constitutional limitations provide little protection from such emergency actions. Gold confiscation by governments is ubiquitous in history, particularly when gold represents the largest storehouse of private wealth.

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346 *See* "Modi's Gold Monetisation Scheme: SBI collects thousands of kg gold; to finally put it to good use", *Financial Express*, June 23, 2000
347 *See* "Indian households have stocked up to 25,000 tonnes of gold: World Gold Council", *Business Today*, May 21, 2019
348 *See* Jadhav, Rajendra: "Update 1-India cuts import tax on gold, industry expects drop in smuggling", Reuters, February 1, 2021
349 *See* Soumya, Joy: "How much gold can I bring to India from Dubai?", *Times of India*, April 15, 2020
350 *See* "Buying gold jewellery? Check how much gold can you hold legally in India?", *Times Now*, March 22, 2021

The Current Risk of Gold Confiscation

History does not repeat, it rhymes.
Mark Twain

Historical events demonstrate that there is no form of constitutional constraints that can stop the ambition of governments to seize wealth. Formal laws and principles act as a brake but do not provide injunctive relief when such huge sums of money are available to politicians. **The threat is greatest when the ambition for spending is highest, such as for a war or a "progressive" agenda. Wars and fiscal profligacy are also the exact conditions under which you want to own gold.** Gold speculators know that acts of gold confiscation are the best opportunity for massive price appreciation.

Fooled me once, shame on you. Fool me twice, shame on me.
Chinese Proverb

The fiscal profligacy of the current decade appears unprecedented, with coordinated quantitative easing by the central banks and many G7 nations promising their citizens helicopter money through MMT magic. The desire for politicians to seize private wealth is again on the rise. But since gold now represents only 1% of global wealth, governments and monetary authorities are hunting elsewhere to seize wealth.

As legal tender, gold was formally money in 1933, but more importantly, people considered gold as money informally: Gold was money and money was gold. Today, gold is not legally a form of money, and neither is it considered money informally by most people, or by monetary authorities. **The desire to seize private gold has thus been greatly reduced.**

The Current Fiat Currency System Makes Your Gold Safer

> *"Gold will be part of the international monetary system in the twenty-first century."*
> Robert Mundell

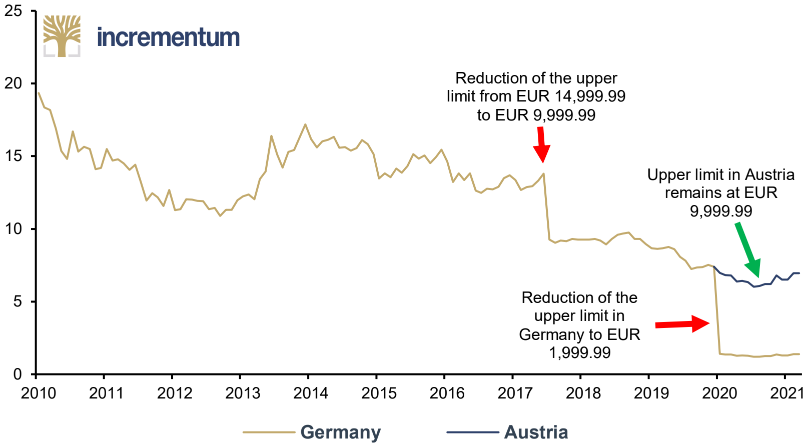
Although gold is not considered money in many countries, there are quite a few where gold is considered a form a money. China, India, Russia, Turkey, and Iran are good examples of such countries. And it is in exactly those nations that there are also the heaviest restrictions on gold ownership and convertibility.

What other actions could central bankers and politicians take against gold?

Probability and expectation are not the same. Its probability and probability times the pay off.
Nassim Taleb

Although central bankers do not see gold as valuable today, that does not mean it is ignored entirely. Anonymous gold purchases are heavily restricted, so that central banks can track any form of wealth storage. As of January 1, 2020, Germany has reduced the upper limit for anonymous gold purchases from EUR 9,999.99 to EUR 1,999.99. In Austria and Switzerland this limit remains at EUR 9,999.99 and CHF 14,999.99, respectively.

Number of ounces that can be purchased anonymously, 01/2010-03/2021



Source: Federal Reserve St. Louis, Incrementum AG

To realize that we live in an absurd culture where we are taught absurd things by absurd people and threatened with absurd consequences for defying all of it is to achieve a level of contentment.
Michael Malice

A taxation of gold and gold assets through a VAT scheme is often being brought up as a possible next step by governments to raise revenue. Some even fear that the restrictions on anonymous gold purchases have been lowered to facilitate the introduction of a VAT. The sheer organizational effort required to implement a VAT makes it improbable, and it is difficult to apply a "value-added" schedule from gold bullion to gold coins.

In the past, various VAT schemes on gold have existed in EU member countries. In 2000 the European Union moved to a single system that abolished a VAT on gold bullion. Any amendments to the VAT exemption status of gold would require a new legislative directive for the Common System of Value-Added Tax approved by the European Parliament, together with the unanimous approval of the governments of the 27 member countries. And it is extremely unlikely that unanimity could be achieved on this point.

For that reason, a more likely tax scheme on gold would be the introduction of a windfall profit tax if the price of gold were to surge. In any scenario, gold poses a risk to the narratives of central bankers and the sanctity of fiat currency that outweighs any benefit they might gain through higher tax receipts. New taxes on gold transactions are unlikely in the near term.

Courtesy of Hedgeye

This brings us to a form of market intervention that does not seem completely impossible: a "cancellation" of the free-market gold price. If the price of gold relative to US dollars or euros surges dramatically higher, government officials and central bankers might seek to halt the rising prices and set a price ceiling. A rising gold price would express a lack of confidence in the U.S. dollar or the euro, and both governments and central banks would see this as an acute threat to the monetary system.

Central banks routinely set caps and floors on their currencies, interest rates as well as their bond prices and equity prices. It would not be extraordinary for them to declare a ceiling for the price of gold. A high price for gold is more like a needle in the eye of a central banker than it is a treasure chest of wealth for a pirate.

There is no such thing as prices outside the market. Prices cannot be constructed synthetically, as it were.
Ludwig von Mises

Gold ETFs or gold futures would be the obvious first place for the government to set the ceiling, and then they might attempt to eliminate the price-discovery mechanism in the gold market. The goal of price fixing would not be to confiscate gold for the government treasury, as we examined in historical episodes. Rather, this removal of the price discovery mechanism would serve to bolster confidence in the fiat system by eliminating a competitor.

Empires implode from within due to their own excesses.
Gad Saad

Gold confiscation is a palpable fear for all gold investors, but that risk is lower today by historical standards. Gold is no longer the primary target of theft by kings, emperors and politicians, because it is no longer the largest store of wealth. Today the bond market is the primary store of wealth, and that is where confiscation of wealth is most likely to occur. **Sleep easily, the balance of reward vs. risk has never been greater for owners of gold.**

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How Bankers Turned Money into ‘Σ 0 ∞ € ¥’

“From the early sixties onward there was virtually no control over the worldwide supply and use of dollars... The enormous expansion in markets for U.S. dollars offshore, and the new networks of interbank relations that made possible the creation of additional supplies of dollars outside the United States and beyond the control of the Federal Reserve.”

Robert Roosa, “Exchange Rate Arrangements in the Eighties”, *The International Monetary System: Forty Years After Bretton Woods* (1984)

Key Takeaways

- **The global economy has been fueled since the 1950s by money created by private banks extending credit to enterprises and households.**
- **This 'money' is a ledger entry – a checkable bank deposit. This was multiplied beyond measure offshore, e.g. in the City of London, off-balance-sheet and off the regulatory radar – until August 9, 2007.**
- **From that day to the present, private banks have shrunk or stagnated their balance sheets as socioeconomic and geopolitical risk outweighed reward. This occurred despite intense central bank efforts to the contrary.**
- **Consequently, the world economy has stagnated and has been forced to suffer four bouts of global or regional ‘money’ shortages.**

Professor Stephanie Kelton, author of the best-seller *The Deficit Myth*, and other modern monetary theorists take great pains to tell you that the government has a monopoly on currency. Quite so! But the world economy is not fueled by *currency*, it is fueled by *money*. This is the story of the rise and fall of the eurodollar[351] – actual modern money, not a theory.

What Is Money?

You think you know that monetary policy is controlled by a central bank adjusting interest rates and/or the size of its bank balance sheets. You are wrong.
Russell Napier

Modern money is better understood as credit[352] – credit to your deposit account, working capital financing, a bank loan, debt issuance. But do not be seduced by the simplicity of these examples. "Credit" is actually far more loosely defined and creatively employed. It is also the bespoke currency forward agreement between an importer and a trade-financing corporation. It is the interest rate swap, the credit default swap. It is, especially, applied mathematics and computer science; it is statistics, economic theory, and expected volatility.

What "money" and "credit" *really are* is imagination: the imagination to develop a financial format that another party will accept as payment. In the monetary realm it is not the central bank that is the dominant, creative force. The Bank of England says as much:

> *"Most of the money in circulation is created, not by the printing presses of the Bank of England, but by the commercial banks themselves: banks create money whenever they lend to someone in the economy or buy an asset from consumers. And in contrast to descriptions found in some textbooks, the Bank of England does not directly control the quantity of either base, or broad money. Of the two types of broad money, bank deposits make up the vast majority – 97% of the amount currently in circulation. And in the modern economy, those bank deposits are mostly created by commercial banks themselves."*[353]

Two key ideas form the basis of our modern monetary system. Firstly, over the course of half a century, commercial banks loosened and broadened the definition of money almost beyond recognition. Secondly, when it comes to modern money supply, central banks are irrelevant, which explains why their outrageous behavior has not set off hyperinflationary infernos across advanced economies.

For every complex problem there is an answer that is clear, simple, and wrong.
H.L. Mencken

The first conclusion seems reasonable – for-profit banks were being proactive. But the second concept – that central banks are not central – comes off as implausible and as an attack on the canonical lessons of Economics 101. That is why this article will repeatedly quote monetary authorities. It will be orthodoxy itself making the case for the unorthodox: commercial bank innovation and central bank subordination.

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351 Likely the best, freely available work to study the eurodollar system is: Snider, Jeffrey, Yusko, Mark and Gromen, Luke: "The Eurodollar University", MacroVoices.com, Alhambra Investments: Making Sense Eurodollar University Episode 1, youtube.com, March 24, 2020; *See also* "Exclusive Interview with Luke Gromen: A Deep Dive into the Geopolitics of Oil, Gold, and Money"; *In Gold We Trust* report 2020, "Monetary Endgame Ahead? When Absurdity Becomes the New Normal"; *In Gold We Trust* report 2020
352 Credit's etymology traces back to Latin and "credere", to believe, entrust.
353 McLeay, Michael, Radia, Amar and Ryland, Thomas: "Money creation in the modern economy", *Bank of England Quarterly Bulletin*, Vol. 54, issue 1, March 14, 2014

How Money Became 'Σ 0 ∞ € ¥'

It was called the "eurodollar" and officially understood to be an overseas US dollar. The prefix *euro* was attached because the phenomenon was first observed in Europe. But it is not clear how or why a substantial number of eurodollars had found themselves there.

When was the eurodollar system born? The earliest, official record that can be traced is dated June 24, 1955, when "*the Bank of England became aware of reports of substantial operations in the exchange market by the Midland Bank who, it appeared, were seeking foreign currency deposits unrelated to their commercial transactions.*"[354]

There are stories that implicate the Soviet Union's recycling earned, or perhaps stolen – or even counterfeit – physical Federal Reserve notes. Other explanations point to US servicemen in Europe and Japan conducting US dollar business in those places.[355] We do not know. We do know that by the mid-1950s British banks were active. We know that by the late-1950s financial journalists were being politely asked to stay quiet about it:

> *"The Eurodollar market was for years hidden from economists and other readers of the financial press by a remarkable conspiracy of silence. I stumbled on its existence by sheer accident in October 1959, and when I embarked on an enquiry about it in London banking circles several bankers emphatically asked me not to write about the new practice."*[356]

It was not just a few US dollars stranded overseas but an entire, parallel network. The emergent network was self-developing, seeking efficiency and effectiveness. As it did it transitioned from physical currency to ledger balances. Meaning that with time the representation of the system became a bank account denominated in US dollars, not a physical Federal Reserve note.

Money is what money does.
John Hicks

As long as customers were not pulling out physical cash but instead conducting business in a manner that allowed banks to exchange ledger balances, then the bank's bookkeepers could create money. They could not create gold or Federal Reserve currency, but banks could create a ledger balance and if users treated it like currency, then it was money. Instead of everyone agreeing that an intrinsically worthless rectangle of green dyed cotton-linen fiber was valuable, the customers of European and Japanese banks agreed that an intangible accounting entry was valuable. **It was 'money'.**

Thus, no reserves, either as paper notes or bullion, were required on eurodollars. It was simply more efficient that way. Commercial banks policed the network based on confidence and reputation. By 1969, when economist and Nobel Prize winner Milton Friedman wrote on the topic, this unofficial US dollar network had grown

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[354] Schenk, Catherine R.: "The Origins of the Eurodollar Market in London: 1955-1963", *Explorations in Economic History*, Vol. 35, Department of Economic and Sicial History, University of Glasgow, 1998, p. 221-238
[355] *See* Snider, Jeffrey P.: "Eurodollar University: Part 1", interview by Erik Townsend, MacroVoices, August 13, 2017
[356] Einzig, Paul: *Foreign Dollar Loans in Europe*, 1965

to 15% of official US dollar supply. The source? **A bemused Friedman noted, *"Their major source is a bookkeeper's pen."***[357]

Collateral: Is 'Mon€y' Part of Money?

By 1974 Federal Reserve Vice Chairman George W. Mitchell worried that American officials were falling deeper into a monetary mystery:

> *"Mr. Mitchell said he could think of no time when the monetary aggregates were less useful for policy purposes than they were now. Another uncertainty in the interpretation of the monetary statistics arose in connection with Euro-dollars; he suspected that at least some part of the Euro-dollar-based money supply should be included in the U.S. money supply.*
>
> *More generally, he thought M1 was becoming increasingly obsolete as a monetary indicator. The Committee should be focusing more on M2 and it should be moving toward some new version of M3 – especially because of the participation of nonbank thrift institutions in money transfer activities. Some of those institutions were offering 5-1/4 per cent on time accounts from which funds could be transferred into a demand deposit by making a telephone call."*[358]

The Federal Reserve vice chairman's first paragraph expresses concern about the quantitative expansion of US dollars offshore. But paragraph two identifies something altogether different: It was a qualitative expansion, this time onshore. As one contemporary economist wrote, traditional monetary measures were suddenly producing "whopping", "unprecedented", "quite unacceptable", and "conspicuous" shortfalls that stood out "like a sore thumb".[359]

However, it turned out 'money' was not missing from the economy. Money as traditionally understood and defined by economists – e.g. M1, M2 – was not missing, but the market had broadened the definition by turning capital market securities into near-money.

The market performed this transformation via repurchase agreements. Businesses in possession of capital market securities such as US Treasury bills, commercial paperscertificates of deposit, bills of exchange, et cetera, would assign those, overnight, to banks, who in turn credited – with a fountain pen – the bank accounts of those businesses. The next day, the businesses would buy back the securities with the funds they borrowed the night before plus a tiny premium.

Why bother? Because if the process is repeated every night, then the business has successfully transformed a capital securities account that will mature into cash in the next one to nine months into an always liquid account – **'Mon€y'.**

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357 *See* Friedman, Milton: "The Euro-Dollar Market: Some First Principles", Morgan Guaranty Survey, October 1969, pp. 16-24
358 "Memorandum of Discussion", Meeting of the Federal Open Market Committee, Federal Reserve, December 16 , 1974
359 *See* Goldfeld, Stephen M.: "The Case of the Missing Money", *Brookings Papers on Economic Activity*, No. 3, Brookings Institution Press, 1976

No Longer Controllable 'M 0 n € ¥'

Up to the early 1970s these machinations seemed controllable. Certainly, there were some disruptive innovations onshore and unchecked passions offshore, but they were still seemingly within the grasp of monetary authorities. By decade's end, though, confronted by eye-watering velocity, seemingly impossible volumes, and sprawling uncertainty, the authorities had been outflanked, and one can sense that the evolution had become independent and unbound. The Federal Reserve Bank of New York explains:

> *"The Euromarkets grew rapidly during the 1970's. All the measures of Euromarket size increased at annual rates above 25 percent. By comparison, a broad measure of the United States money supply that includes large negotiable certificates of deposit (CDs) and time deposits grew at an annual rate of about 10 percent between 1970 and mid-1979, as did a broad measure of the German money supply."*[360]

Whereas Friedman's 1969 estimate of the size of the eurodollar market was USD 30bn, or 15% of M1, by 1979 the Federal Reserve Bank of New York estimated it was USD 900bn, a seemingly impossible 175% of M1.[361] Sprawling uncertainty existed, not only in quantifying the unofficial US dollar system but in administering it:

> *"But the emergence of the extraterritorial Euromarket created ambiguities about **which central bank would be responsible** for providing lender-of-last-resort support for overseas operations. No final resolution of those ambiguities has yet been reached, and it is doubtful that central bankers will ever codify their respective roles or lay down conditions for lender-of-last-resort assistance."*[362]

The Federal Reserve Bank of New York's lament that nobody oversaw offshore money was shared by others. Guido Carli, the former governor of the Bank of Italy, stated in 1979:

> *"The possibility of a repetition of the same sequence of events that followed the 1973 crisis has revived interest in Euromarket regulations. But it is perhaps too late. The volume of the international liquidity denominated in dollars has reached levels that may **no longer be controllable by any one authority**."*[363]

A few years later, in 1984, Robert Roosa, a US Treasury official, warned:

> *"Second, with offshore markets able to create dollars, reliance upon dollars generated within the United States to provide the world with a controlled*

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[360] Frydl, Edward J.: "The Debate over Regulating the Eurocurrency Markets", *Quarterly Review*, Vol. 4, No. 4, Federal Reserve Bank of New York, 1979/80, p. 11-20
[361] *See* Frydl, Edward J.: "The Debate over Regulating the Eurocurrency Markets", *Quarterly Review*, Vol. 4, No. 4, Federal Reserve Bank of New York, 1979/80, p. 11-20
[362] Frydl, Edward J.: "The Debate over Regulating the Eurocurrency Markets", *Quarterly Review*, Vol. 4, No. 4, Federal Reserve Bank of New York, 1979/80, p. 11-20, emphasis added
[363] Carli, Guido: "Guido Carli: dollar is on the way out", Excerpts of speech in Philadelphia October 31, *Executive Intelligence Review*, Vol. 6, No. 44., November 13, 1979, p.11-12, emphasis added

*supply of reserve currency (as a sort of governor of worldwide purchasing power) became impossible. For from the early sixties onward there was virtually **no control** over the worldwide supply and use of dollars."*[364]

By the end of the 1980s banks were doing what they had to – including breaking the law – in order to secure the best collateral in the system, i.e., US Treasuries, to gain access to repos for their own short-term funding purposes and to lend the collateral to others, rehypothecating multiple times for profit. Collateral had become a derivative form of money granting access to a near-money market that transformed securities into liquid ledger balances **– 'M o n € ¥'.**

Math as 'Σ 0 n € ¥'

I have come to wonder about my time at the Monetary Policy Committee setting interest rates. It's been a bit of a waste of time really.
Dame Kate Barker, Former member of the Bank of England Monetary Policy Committee

In the mid-1990s the financial industry was led astray by the false promise of objective, advanced statistical analysis. RiskMetrics, a risk model released publicly in October 1994 by JP Morgan, licensed financial institutions to aggressively and confidently interpret what defined money.[365] JP Morgan's value-at-risk framework was a collection of techniques based on historical volatilities and correlations between financial assets, "*to measure market risks in portfolios of fixed income instruments, equities, foreign exchange, commodities, and their derivatives issued in over 30 countries.*"[366]

RiskMetrics' arrival accelerated a psychological sea-change in the perception of and responsibility for risk. In the 1980s financial institutions moved away from partnerships, with personal liability, towards corporations, with limited liability. RiskMetrics further absolved personal accountability, not in the legal sense but in an instinctive one. Sophisticated analytics and rocket-science probability theory besotted whatever good, intuitive sense of risk existed. Why trust your gut when you had JP Morgan's set of mathematical techniques and data to measure market risks? **By the early 2000s Gaussian copulas were money.**[367]

To outward and carefully managed appearances, central banks stood assuredly in the monetary system's center. Yet they were literally incapable of describing what they were responsible for. **Chairman Greenspan, in a discussion with his colleagues, offered his (sensational) thoughts on the matter:**

"The problem is that we cannot extract from our statistical database what is true money conceptually, either in the transactions mode or the store-of-value mode. One of the reasons, obviously, is that the proliferation of products has been so extraordinary that the true underlying mix of money in our money and near money data is continuously changing.

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364 Roosa, Robert V.: "Exchange Rate Arrangements in the Eighties", Paper at The International Monetary System: Forty Years After Bretton Woods Conference, Federal Reserve Bank of Boston, May 1984, p. 104 – 126, emphasis added
365 *See* Snider, Jeffrey P.: "Americans Are Sheltered and Wholly Unaware", RealClearMarkets, June 19, 2015
366 "RiskMetrics™ – Technical Document", Fourth Edition, Morgan Guaranty Trust Company of New York and Reuters, December 17, 1996
367 *See* Snider, Jeffrey P.: "Eurodollar University: Season 2 Part 1", Interview by Erik Townsend, MacroVoices, August 9, 2018

As a consequence, while of necessity it must be the case at the end of the day that inflation has to be a monetary phenomenon, a decision to base policy on measures of money ***presupposes that we can locate money. And that has become an increasingly dubious proposition****."*[368]

'Σ 0 ∞ € ¥'

Modern money, a lubricant of global economy activity, began as a fountain pen. By the new millennium's inauguration, it was a self-reinforcing, independent network careening forward with parabolic momentum. It was both indispensable and ungovernable. With 'Σ 0 ∞ € ¥' cloaked in algorithmic 'truth', the old wisdom of mathematicians who disputed the presumed impartiality of their field was forgotten – or unwelcome. As the prince of paradox, English writer G. K. Chesterton, once explained:

"The real trouble with this world of ours is not that it is an unreasonable world, nor even that it is a reasonable one. The commonest kind of trouble is that it is nearly reasonable, but not quite. Life is not an illogicality; yet it is a trap for logicians. It looks just a little more mathematical and regular than it is; its exactitude is obvious, but its inexactitude is hidden; its wildness lies in wait."[369]

The wait ended on August 9, 2007, at 1:44 AM Eastern Standard Time, when the following dateline crossed the newswire:

"PARIS (Reuters) - France's biggest listed bank, BNP Paribas, froze 1.6 billion euros ($2.2 billion) worth of funds on Thursday, citing the U.S. subprime mortgage sector woes that have rattled financial markets worldwide."[370]

Global money centre banks began withdrawing capital across multiple dimensions with an urgency not witnessed in four generations. The first of (at least) four liquidity crises had begun.[371] The world turned to the centre for help, but there was nobody there – there never had been.

The Eurodollar, Post-Covid

The 2007-19 experience saw private banks shrink their balance sheets while central banks expanded theirs. Quantitatively speaking, central bank money, i.e. bank reserves, did not replace one-for-one private bank money, i.e. credit, let alone restore money growth rates to their post-WW2 trend.

Qualitatively speaking, central bank money is a low-potential, narrow monetary format, akin to a laundromat token, that pales in

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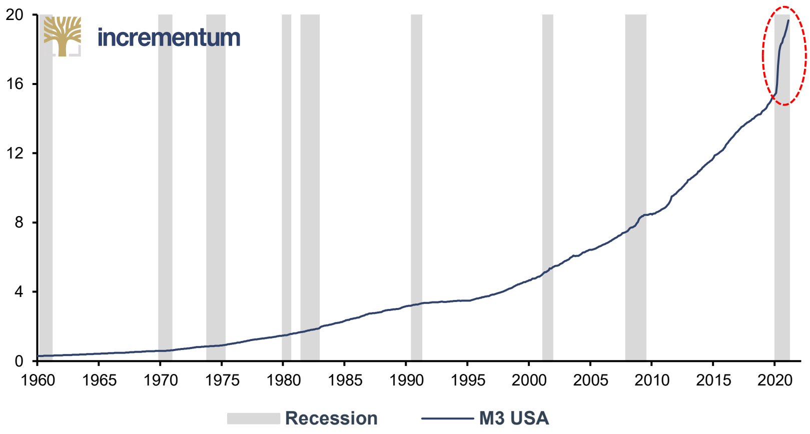
368 "Minutes of the Federal Open Market Committee", Federal Reserve System, June 27 - 28, 2000, emphasis added
369 Chesterton, Gilbert Keith: *Orthodoxy*, 1908
370 Kar-Gupta, Sudip and Guernigou, Yann Le: "BNP freezes $2.2 bln of funds over subprime", *Reuters*, August 9, 2007
371 The first: 2007-09 North Atlantic Banking Crisis. The second: 2011-12 European Sovereign Debt Crisis. The third: 2014-16 Emerging Markets Crises. And the fourth: 2018-20 De-Globalization Crises.

comparison with bespoke, curated bank credit. The global economy found this arrangement wholly unsatisfactory, and within a few years we began to observe the political and social consequences.

But 2020 changed something. A new player has entered the money creation business: politicians. The reader can see the difference in this graph of M3 money supply in the US. The surge was not the result of central bank actions, which were constant between 2007 and 2019 and showed little impact on M3 during that period. Nor was the 2020 surge a result of fiscal deficits, which were unbelievably big during all three US administrations of the 2007–19 period – think 'drunken spending' and 'unfunded tax cuts' – but also had little impact on M3. What is new is the government-guaranteed bank loan scheme. And not just in the United States but around the world.

M3 USA, in USD trn, 01/1960-04/2021



Source: Federal Reserve St. Louis, Incrementum AG

In the US, the emergency response to Covid-19 came with two such programs: the Paycheck Protection Program and Main Street Lending Program. In Britain it was the Coronavirus Business Interruption and the Bounce Back Loan Schemes. In Canada we saw the Highly Affected Sectors Credit Availability Program – with the government guaranteeing 100% of the loans extended by financial institutions! The French called theirs "prêt garanti par l'état". New Zealand has a lending scheme. As does South Africa.

Throughout the period 2007–19 the monetary measure remained weak – despite wild spending by many governments and mad central bank actions. Why? Because, as the prior pages have explained, the private-bank credit-money network is supreme, and it had remained 'on strike'. Not until politicians guaranteed credit extended by private banks directly to the public did this change to money supply occur.

Be careful what you wish for, lest it come true!
Aesop

This year's *In Gold We Trust* report features an interview with a professional gentleman of financial history, Russell Napier. Many more details about the "sovereign-bank-corporate nexus" will be found there.[372] If the decade ahead is like 2007–19, when it was central bankers in the lead and private

[372] *See* chapter "Yield Curve Control, the Biggest Mistake of the ECB So Far! – Exclusive Interview with Russell Napier" in this *In Gold We Trust* report.

banks on the sidelines, then the world will remain in a disinflationary or deflationary environment. But if politicians facing angry electorates seize the reigns of credit creation, then we will see the revival of money growth. **Unfortunately, as Mr. Napier explains, we must be careful what we wish for.**

Conclusion

The chief problem of this highly efficient arrangement is that it is all predicated on faith to some degree. Bank liabilities even in these more esoteric modern forms were treated as largely equivalent substitutes – until August 2007. If a grain of sand can ruin a semiconductor, a grain of doubt can obliterate a system run on faith. Since the eurodollar is simply promises of promises (of promises), doubt is its Achilles' heel once you start questioning the chains of traded liabilities, tugging on any of the (trillions) loose threads.
Jeff Snider

The reason the reader needs to follow the eurodollar system is because it is the global metronome. Time and time again its expansion, stagnation, contraction, and reflation has presaged which direction currencies, commodities, and capital markets would turn. More unsettlingly, because of the now-extraordinarily long stagnation, the eurodollar system's contraction and reflation now spills over into our social and political realms; disorder in money is no longer constrained to economics.

"Money makes the world go round" is a cliché, yes, but it is also a first principle. The reader knows this instinctively. What the reader may not have known, but hopefully now understands, is that it is 'Σ 0 ∞ € ¥' and not money or central bank reserves, that makes the economy spin.

Tracking 'Σ 0 ∞ € ¥' is not easy, as by definition it lies in the shadows. But we can observe its influence. We recommend you look to: aggregated bank balance sheet sizes, financial corporation debt, private nonfinancial corporate debt, short- and long-term sovereign bond yields, index-linked sovereign bonds, cross-currency basis swaps, US dollar swap spreads, and eurodollar futures spreads.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Toward a New Monetary System in One Generational Leap

“The Times They Are A-Changin’.”

Bob Dylan

Key Takeaways

- The current monetary world order, established after the Bretton Woods system collapsed in the 1970s, has outlived its usefulness.
- To rebuild confidence in a new monetary system, policymakers will be forced to anchor an international currency to something tangible, most likely gold.
- We will not return to a free-market gold standard, but currency anchoring may take the form of a gold-backed central bank digital currency.
- The Millennial generation – with their pragmatic, borderline authoritarian view of good government – will soon come to power. They may feel there is little to lose from implementing radical change.
- Regions vying for dominance will lead to the introduction of competing digital currencies, with China forcing theirs upon economically dependent states while the US and Europe push their own versions in their spheres of influence.

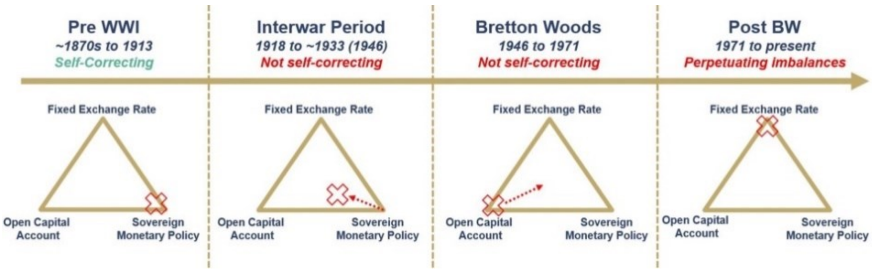
About the author: *This chapter was contributed by our dear friend Hans Fredrik Hansen, who worked as a senior economist for several large multinational oil companies, in the US, Europe and the Middle East.*

When Richard Nixon defaulted on US dollar liabilities by severing the gold link "temporarily" fifty years ago, he unknowingly set in motion a force of destructiveness so powerful that it completely changed the global economy. **Left unchecked, this force will threaten the integrity of society itself over the course of the next decade.**

Times of bad money are times of good theory.
Friedrich A. v. Hayek

The monetary order brought about by the end of the Bretton Woods system in 1971 was inevitable, and while we may think of a new monetary order as a cataclysmic event so profound it is impossible to imagine in today's modern world, they have occurred surprisingly often through history.

At its most basic level, a monetary order faces the macroeconomic *trilemma*, also known as *impossible trinity*, which states that it is impossible to realize a sovereign monetary policy, fixed exchange rates, and an open capital account all at the same time. A single country can only pursue two out of the three options at the same time and must necessarily abandon one. That being said, all but one constellation has been stable over the longer run.



Source: Hans Fredrik Hansen

The desire of gold is not for gold. It is for the means of freedom and benefit.
Ralph Waldo Emerson

The gold standard era before World War I created a relatively stable system, particularly in the early years when the *price-specie flow mechanism* was mostly left to its own devices. David Hume argued, correctly, that a positive current account balance leads to gold inflows, increasing the domestic money supply, raising price levels, creating a loss of competitiveness, which *automatically* turns the surplus into current account deficit with corresponding gold outflows, falling prices, and improvement in terms of trade for new gold inflows.

True ignorance is not the absence of knowledge, but the refusal to acquire it.
Karl Popper

This system did not create persistent and one-sided current account surpluses nor deficits like those we see today. It constrained debt levels, especially unproductive debt, from ever reaching systemically dangerous levels, and it disciplined governments. A central bank's main task was to ensure that the price-specie flow mechanism was followed. Ideally the central bank should be removed from the equation, because simply having a central bank will be a temptation too great to resist for governments. A politician is always eager to "cheat" and inflate when the market mechanism deflates. To be able to stem market corrections brought about by gold outflows is obviously a Faustian bargain, which ends up costing far more over the long term than is gained in the present.

Whatever link to gold existed prior to 1914 was obviously undone during World War I, when belligerent nations printed money as if their lives depended on it, which they basically did.

The very existence the Federal Reserve System is a safeguard against anything like a calamity growing out of money rates …. We have the power to deal with such an emergency instantly by flooding the street with money.
Benjamin Strong

In the interwar period policymakers, most notably in London and New York, tried to mimic the old pre-War gold standard by deflating the UK price level in a misguided attempt to reach pre-war parity, and simultaneously inflating US prices to achieve parity as quickly as possible.

Montagu Norman from the Bank of England persuaded Benjamin Strong at the New York Federal Reserve to inflate to make his own job easier – this cross-Atlantic coordination clearly made a mockery of the gold standard by removing its ability to self-correct.

Inflation led to the 'Roaring 20s' (sound familiar?) in the US, while deflation caused a lengthy depression in the UK. Accompanying macroeconomic imbalances during the 1920s increased volatility of output, which culminated in the Great Depression of the 1930s.

With the Great Depression fresh in mind and a devastating war still ongoing, a total of 44 allied nations met at the Mount Washington Hotel in Bretton Woods, New Hampshire, to plan for the new monetary world order that would guide international commercial relations after the war.

Centrally managing the world economy to avoid volatility in output was chief among the 730 delegates' concerns. Believing that the rigidity of a gold standard was the cause of the Great Depression, and indirectly the war, they decided that a new system was needed.

Fixed exchange rates and an active monetary policy were believed to be the best solution, even though capital controls had to be imposed. Any balance of payment problems would (temporarily) be funded by the IMF. **Wartime debt could easily be inflated away by financial repression, since newly printed money was not allowed to leave the jurisdiction where it was created.**

Truth is treason in an empire of lies.
George Orwell

Yet again the world was forced to labor under a system unable to self-correct. It was implied that no one would ask for a single ounce of gold for every USD 35 they had in their foreign exchange reserves, which gave rise to the "*exorbitant privilege"* Americans have enjoyed ever since. The US could fund Johnson's Great Society, a war in Vietnam, and the excessively costly Apollo space program with money created ex nihilo at the expense of the rest of the world.

I have come to the conclusion that politics are too serious a matter to be left to the politicians.
Charles de Gaulle

Large reserves of US dollars inevitably started to accumulate in Europe, which incidentally became the precursor to the eurodollar market that completely dominates global finance today.[373] Forcing Europeans to pay for socialist programs in the US was particularly irritating to the French, so Charles de Gaulle sent his navy across the Atlantic to pick up France's claim to gold. Others followed suit in what can only be characterized as a run on the US dollar. The London Gold Pool trembled under stress, forcing a sterling devaluation and, some years later, a complete breakdown of the Bretton Woods system, with Nixon severing the gold link.

—
[373] *See* chapter "How Bankers Turned Money into 'Σ 0 ∞ € ¥'" in this *In Gold We Trust* report.

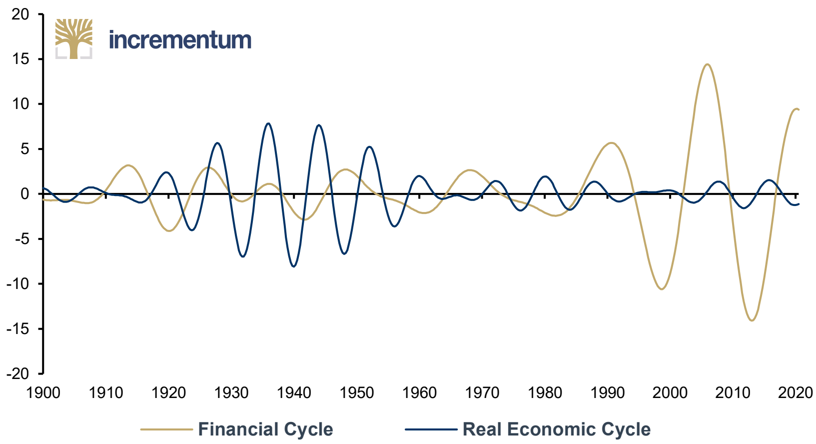
A new monetary order was imposed upon the world almost overnight. Currencies became floating abstractions without any link to the real world. Central banks were from then on completely liberated, unshackled from the "barbarous relic" and free to manage economies as they saw fit. August 15th, 1971 marked the advent of the "Ph.D. standard" – a technocratic dystopia that slowly turned into a centrally planned nightmare.

Post Bretton Woods – Perpetuating Global Imbalances

The monetary managers are fond of telling us that they have substituted 'responsible money management' for the gold standard. But there is no historic record of responsible paper money management. (...) The record taken, as a whole is one of hyperinflation, devaluation and monetary chaos.
Henry Hazlitt

After the shock of 1971 was overcome, the post Bretton Woods era came to be known as the *Great Moderation* for the success that was achieved in containing volatility in output. Financial markets increasingly became tools for macroeconomic stabilization rather than the institutions for efficient capital allocation that they were originally set up to be. Consequently, as shown in the following chart, financial-cycle amplitudes increased dramatically.[374] Financial cycles have arguably become so dominant that they themselves are driving business cycles and not reacting to them as they used to do.

Financial Cycle vs. Real Economic Cycle, Q1/1900-Q3/2020

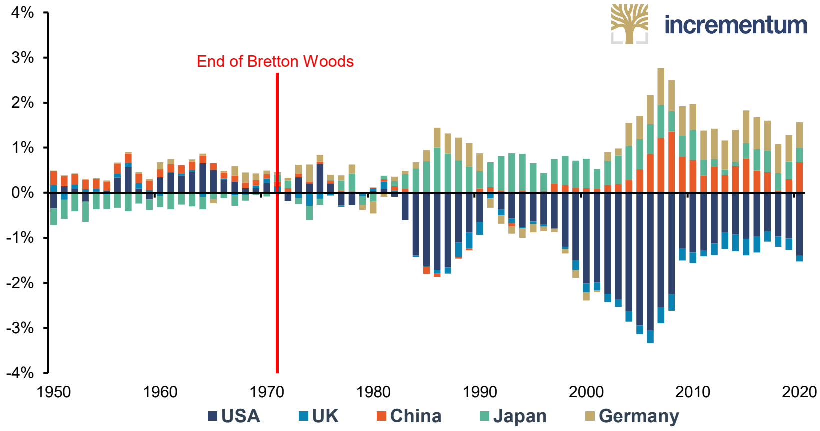


Source: Historical Stat. of USA, Robert Shiller, BEA, BLS, Federal Reserve, Bloomberg, Author's calculations and estimates, Incrementum AG

Although the Bretton Woods system was flawed in many ways, it never came close to creating the perversions witnessed in its aftermath. Current account imbalances, for example, remained relatively stable until 1971, but quickly blew out of proportion thereafter and became increasingly one-sided. Current account deficit countries, most notably the US and UK, continued to grow their deficits, with only temporary moderations brought about by financial crisis. On the other end of the spectrum, China, Japan and Germany, content to accumulate foreign assets denominated predominantly in dollars and to lesser extent in euros and pounds, grew their current account surpluses.

[374] For the financial cycle calculations, an index based on four components (total debt as % of GDP, housing prices, CAPE, and long-term interest rates (inverted) was created and then a bandpass filter was used. The business cycle is calculated from GDP data, over which a bandpass filter was set.

Current Account, in % of GDP, USA, UK, China, Japan, Germany, 1950-2020

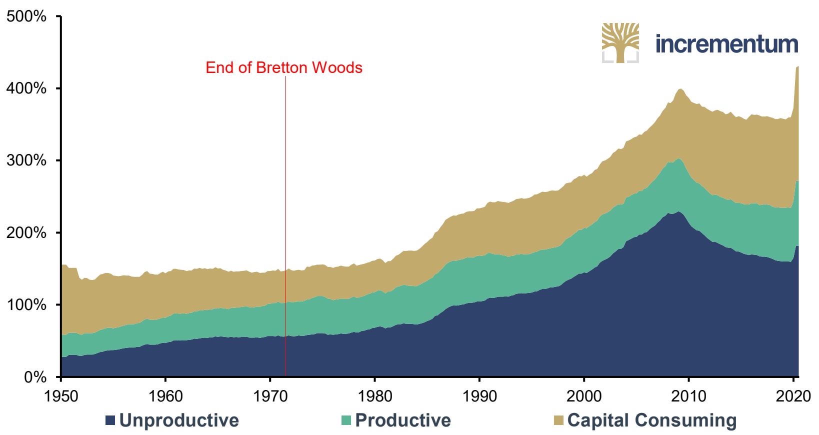


Source: World Bank, Maddison, CEIC, ONS, BEA, Bundesbank, Oxford Economics, Author's calculations and estimates, Incrementum AG

The flip side of current account imbalances is the *net* international investment position and domestic debt accumulation. Debt to fund current consumption, which via financial wizardry is transformed into investment-grade securities, acts as collateral *in lieu* of payments owed foreigners for their exports. A large-scale buildup of unproductive and capital-consuming debt deprives society of capital needed to organically sustain economic growth.

Since the debt load supports a large share of the economy, directly or indirectly, it cannot be allowed to fail. Central banks have therefore become beholden to zombie companies and indebted households, lowering interest rates and pushing liquidity into the system to keep these afloat. Zombie companies are on the rise across the globe, hanging like a gigantic rotting albatross on the neck of productive businesses.[375]

US Debt by Type, in % of GDP, Q1/1950-Q3/2020



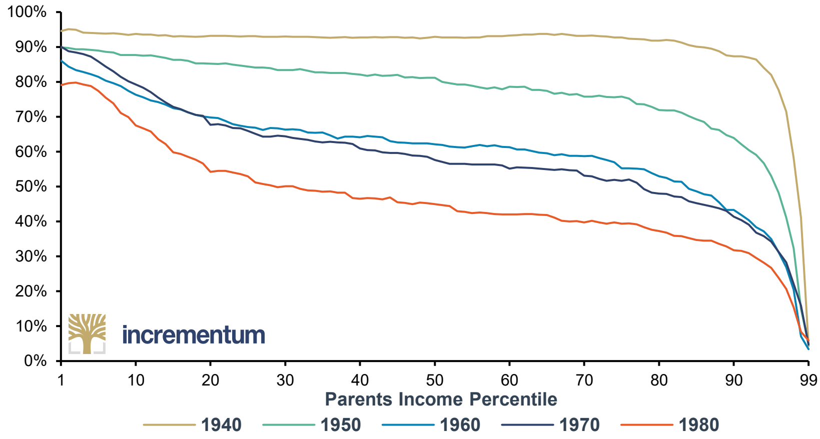
Source: Federal Reserve, BEA, Author's calculations and estimates, Incrementum AG

[375] For a detailed account of the background of the development of zombie companies *see* Stöferle, Ronald, Taghizadegan, Rahim and Hochreiter, Gregor: *The Zero Interest Trap*, 2019

Capitalism without financial failure is not capitalism at all, but a kind of socialism for the rich.
Jim Grant

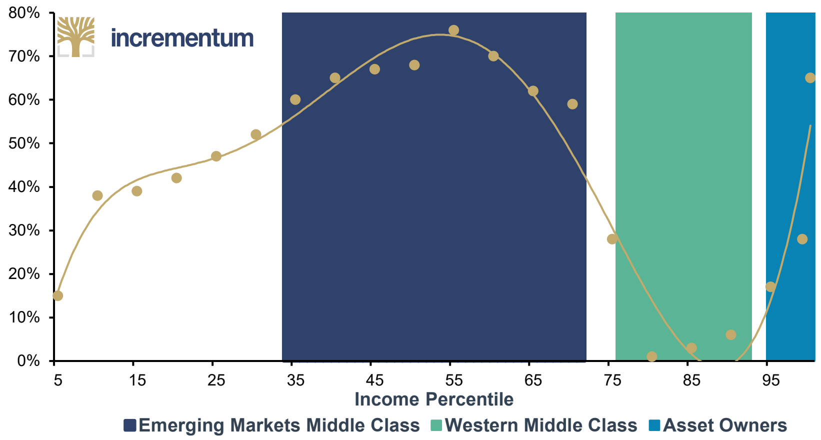
And although the post-Bretton Woods system did reduce output volatility, it did so by lowering growth, hollowing out the middle class, and creating a sense of hopelessness that has led to political polarization and anger. This perverted form of "capitalism" created a boon for emerging-market middle class workers as manufacturing capacity left the US and Europe, but at the same time pulled Western middle-class wages down. **A person born in 1980 to a middle-class family is unlikely to achieve the level of material well-being they were used to growing up.**

Probability of Exceeding Parents Income at the Age of 30



Source: Opportunity Insights, Author's calculations, Incrementum AG

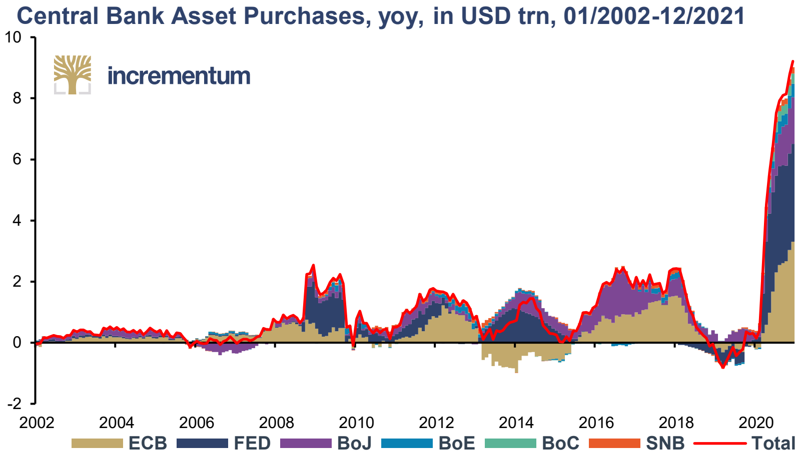
The Elephant Curve: Cumulative Global Income Growth, by Percentile



Source: Lakner & Milanovic, Author's calculations, Incrementum AG

The mystery of human existence lies not in just staying alive, but in finding something to live for.
Fyodor Dostoevsky

Humans and society at large can withstand a great deal of pain if they maintain hope that the not-too-distant future will be better. When hope disappears, society starts to crack. If a majority of the population no longer feel they have a vested interest in upholding the *status quo*, then they will feel few qualms in accepting radical new ideas and voting for political leaders that promise Utopia, either through a return to the good old days or by the implementation of a brand-new system that is believed to fundamentally correct the ills of the current one. Central banks creating trillions of new currency units every year proves beyond doubt that the current system is unsustainable. Without trillions in new money, a deflationary maelstrom will quickly consume markets and eventually society breaks.



Source: Bloomberg, Author's calculations, Incrementum AG

Toward a New World Order in One Generational Leap

Courtesy of Hedgeye

Sooner or later, if something is unsustainable, it will by definition come to an end. It is only a question of when and, more importantly, how. In their 1997 book *The Fourth Turning* William Strauss and Neil Howe wrote:

> *"Around the year 2005, a sudden spark will catalyze a Crisis mood. Remnants of the old social order will disintegrate. Political and economic trust will implode. Real hardship will beset the land, with severe distress that could involve questions of class, race, nation, and empire…*
>
> *"The very survival of the nation will feel at stake. Sometime before the year 2025, America will pass through a great gate in history, commensurate with the American Revolution, Civil War, and twin emergencies of the Great Depression and World War 2. The risk of catastrophe will be very high…*
>
> *"Americans will also enter the Fourth Turning with a unique opportunity to achieve a new greatness as a people. As the old civic order gives way, Americans will have to craft a new one. This will require a values consensus and, to administer it, the empowerment of a strong new political regime. If all goes well, there could be a renaissance of civic trust…"*[376]

Back in 1997 Messrs. Strauss and Howe's predictions might have been dismissed as hyperbole, but the financial crisis and its reverberations have proven them eerily correct. If the ongoing "fourth turning" has played out according to their theory so far, then they may also be correct about how it ends.

[376] Strauss, William and Howe, Neil: *The Fourth Turning: An American Prophecy*, 1996

The rapid loss of civil liberties in 2020, culminating with the storming of the US Capitol, suggests America is indeed disintegrating and only an existential crisis will bring it back together.

The object of life is not to be on the side of the majority, but to escape finding oneself in the ranks of the insane.
Marcus Aurelius

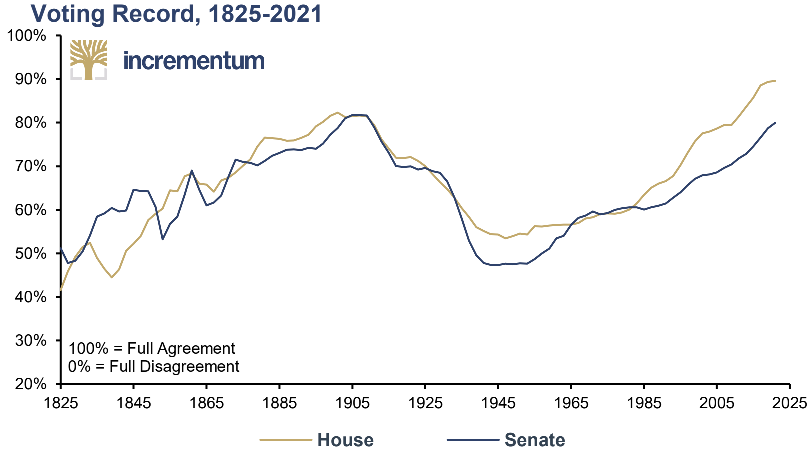
To understand how this plays out, it is important to know the generation that is about to lead nations and businesses. Whilst the Boomer generation still clings on to top positions in politics and business, making little room for the nomadic and individualistic Generation X, it will soon be time for the famous Millennials to take the reins.

Democracy and socialism have nothing in common but one word, equality. But notice the difference: while democracy seeks equality in liberty, socialism seeks equality in restraint and servitude.
Alexis de Toqueville

The first cohort of Millennials was born in 1982 and will be over 40 by the next presidential election in 2024. From the 2028 election cycle they will be experienced politicians and business leaders. These are the people that will shape the US society and its economy, not to mention its military, in times of crisis and despair.

Millennials were brought up overly protected by their parents, which gave rise to the term *snowflakes*.[377] They are civic-minded, with a focus on social justice and community action. A 2019 Gallup poll showed that among Millennials, socialism and capitalism are equally popular. Among earlier generations, however, capitalism is significantly more popular than socialism, by a ratio of 2/3 to 1/3.[378]

Ideological Difference: US Congress, Left/Right Dimension by Voting Record, 1825-2021



Source: Lewis et al (2020), Author's calculations, Incrementum AG

Millennials expect to create a better future, using the collaborative power of digital technology.
Mal Fletscher

Millennials are also the most educated generation in history. This does not necessarily mean they have academic degrees useful in society, and many of them find themselves doing menial jobs, harboring strong feelings of being unjustly deprived of the greatness they themselves believe they are destined to in life.

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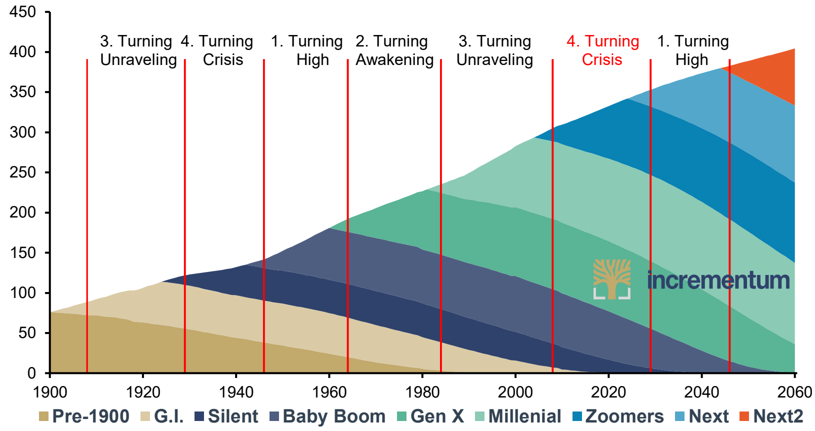
377 *See* Wikipedia: Generation Snowflake
378 Gallup: "Socialism as Popular as Capitalism Among Young Adults in U.S.", November 25, 2019

I have had to revise my formula for happiness. I used to think it was reality minus expectations. But that needs to be modified to reality minus the right expectations.
Vitaliy Katsenelson

Carrying unsustainable levels of student debt, unable to surpass their parents' material well-being, often living "in the basement" into their 30s, they have a sense of great injustice in a system rigged against them, with little hope for betterment in the future as asset price inflation runs amuck and ruins the *American Dream*. **These are the forces that shape a generation of soon to be leaders. The same forces are therefore destined to shape society at large.**

US Population by Generations and 'Turnings', in mn, 1900-2060



Source: Census Bureau, Strauss & Howe: 'The Fourth Turning', Author's calculations and estimates, Incrementum AG

History is seasonal, and winter is coming.
Neil Howe

Add Peter Turchin's theory of e*lite overproduction* to the Fourth Turning, and we see a perfect storm forming on the horizon. Mr. Turchin argues that elite overproduction, historically through hereditary titles and more recently via higher educational attainment, creates a mismatch between *real* power and privilege and the number of people feeling entitled to power and privilege. As the gap builds, conflict eventually boils over, whether we are talking about nobles without castles and armies or Millennials with fancy (and expensive) college degrees tending bars, and feeling cheated of the power and status they believe is rightfully theirs.

From this tumult springs counter-elites joining forces with the commoners to gain power over the sitting elite. Donald Trump is a perfect example. Coming from money and attending all the right schools but never accepted by the powers that be, he used the anger felt by today's have-nots to gain power.

We are analog beings living in a digital world, facing a quantum future.
Neil Turek

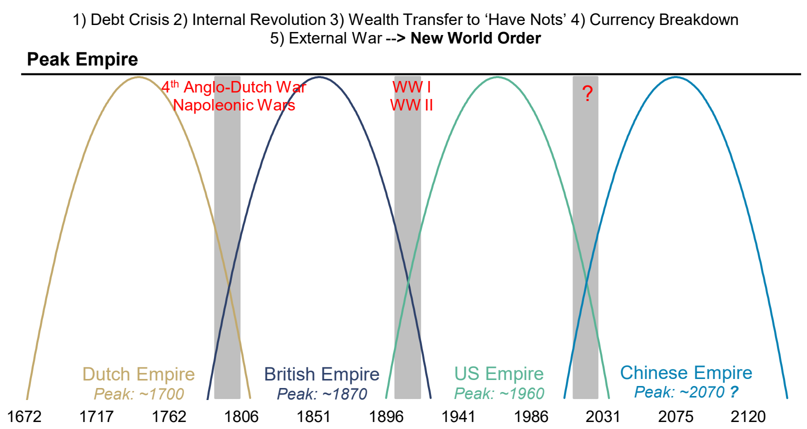
The sitting elite, on the other hand, will always try to keep the masses happy with "bread and circuses" to make sure the pitchforks are safely stowed away, but this is the very strategy that eventually leads to their own downfall. As shown above, spending money that was created *ex nihilo* consumes capital, creating indentured "slaves" and a low-growth economy. When government runs out of 'other people's money', pitchforks oftentimes become effective tools for social change.

The Fourth Turning and elite overproduction views of the world seamlessly substantiate each other and fit well with the topsy-turvy world we live in today.

It Is Not Your Grandfather's World Anymore

The US came out of the last Fourth Turning destined to lead, but finds itself today in a vastly different world. The US empire is in relative or maybe even absolute decline, while its chief adversary, China, is growing briskly.

Life Cycle of Empires



Source: Ray Dalio: "The Changing World Order; Where Are We and Where Are We Going", Author's calculations, Incrementum AG

Whoever wishes to foresee the future must consult the past; for human events ever resemble those of preceding times. This arises from the fact that they are produced by men who ever have been, and ever will be, animated by the same passions, and thus they necessarily have the same result.
Niccolo Machiavelli

Empires follow a lifecycle just as human beings do, which makes them similar to the *saeculum* of generational cycles. From taking their first baby steps out into the world, future empires quickly become brazen adolescents, audaciously conquering territories without moral qualms, before they turn into responsible parents, caring for their colonies, acting as responsible stewards of a global reserve currency, complete with a financial center serving the entire world. Eventually an empire has a mid-life crisis, spends lavishly, becomes lazy, old, indebted, and weak – and inevitably succumbs to the new, ambitious kid on the block with a spring in his step.

The US is now surviving on utilizing its "exorbitant privilege" to the absolute maximum. History teaches us that this is indeed a Faustian bargain, as it hollows out manufacturing capacity, consumes capital, distorts incentives, and is destined to lead to collapse. Still – first through temptation, then out of utter desperation – money printing is impossible to stop.

But what experience and history teach is that peoples and governments have never learned anything from history and acted on lessons that could have been drawn from it.
G. W. F. Hegel

While China is the obvious contender for the top spot, they already have many of the internal problems that the more mature US empire took a century to accumulate. China is rapidly ageing; its economy is inefficient, and growth can only be achieved by pouring investment onto an already saturated economy, which means low to negative returns on a high and growing pile of debt. How the transition from US to Chinese hegemony will play out is impossible to say; but if history is any guide, we will see financial crisis, wealth transfers, currency crisis, and internal disorder projected outward toward external enemies, ending in total war.

It is said that history repeats itself, or at the very least rhymes; and so far in the current cycle, events have played out ominously close to script. **Fingers crossed as the final chapter of the Fourth Turning plays out in the 2020s.**

Where Does It All End Up?

The current economic setup is clearly not working anymore. It is deeply flawed and unsustainable. A change will come, but to trigger radical change, two things are needed.

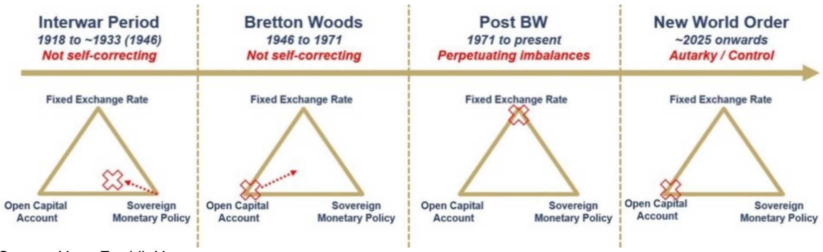
The further a society drifts from truth the more it will hate those who speak it.
George Orwell

Firstly, a generational shift in leadership. The Millennial generation will come to power soon, with their pragmatic, borderline authoritarian view of good government. They feel there is little to lose from implementing radical change, as the status quo has not been helpful to them.

Secondly, a crisis. What form it takes will shape the response to it, but whatever it becomes, a financial crisis will certainly accompany it.

Combined, the two conditions will set the stage for radical change in the world of finance. Just as the delegates meeting in Bretton Woods looked back and all agreed that volatility in output must be tamed, the delegates who will meet to devise the new world order in response to the next crisis will look back at financial volatility and agree it must be controlled.

Along with making financial markets more just, a flexible monetary policy is high on the wish list. We are more likely to see an MMTesque path than a return to a restrictive gold standard. That leaves only one possible macroeconomic solution, and that is to close capital accounts and to "manage" exchange rates.



Source: Hans Fredrik Hansen

This is like the Bretton Woods system, but back then the world was closer to autarky than today, and progress in globalization was easy to achieve. This time we have the exact opposite situation, and the new system must be managed alongside a continuation of decoupling that reduces global trade.

US dependence on China has exposed strategic weaknesses to the point of jeopardizing national security. Covid-19 only adds to that perception, with US supplies of personal protective equipment and vaccines being produced abroad. Nor have we seen the last of tariffs, quotas, or other non-tariff barriers to trade. It is not unreasonable to expect the consolidation of three large blocks, with their own capital account restrictions vis-à-vis one another: A North American bloc tied to the US dollar; a European bloc tied to the euro, which potentially stretches down to North Africa and the Middle East; and of course a Pacific bloc tied to the RMB.

We're moving from a world that was constantly globalizing to one breaking up into three different empires, each with their own currency, reference bond market, supply chains. There are massive investment implications.
Louis-Vincent Gave

This new world order would satisfy many of the needs Millennials have in order to achieve their objectives. For example, making sure money circulates within their own jurisdiction will make inflation easy to create. Debt can thus be reduced via financial repression. Trade between the blocs will obviously be curtailed, but that is also part of the program. Manufacturing will be localized, but new technology does not necessarily mean great efficiency losses.

Nonetheless, the US will be the relative loser in this, as their level of consumption must be reduced to free up capital for domestic investment in manufacturing. The change will obviously not be brought about by their own volition but forced through currency crisis.

Central bank digital currencies (CBDCs) open possibilities for easy bilateral trade and settlement without going via the US dollar detour. All central banks have programs in place today to make that shift. When that happens, US dollar demand will fall dramatically, triggering a crisis of confidence in the US dollar.

Somewhat paradoxically, a brief but more extreme than ever before rally in the US dollar will be a sign of coming complete collapse, since the world does not run on US dollars but rather on claims to US dollars in various forms. Getting rid of the claims means selling them for US dollars proper. That process is tantamount to increased US dollar demand; but unlike in a "plain vanilla" financial crisis, US dollar strength will be short-lived. US dollars received from sales of claims to US dollars will not be hoarded, as is normal during a financial crisis, but immediately exchanged for US-based goods and real assets, spiking price inflation. The sale will also free up US dollars for those next in line to get rid of their US dollar-denominated claims, boosting the velocity of the US dollar. All this suggests rapid inflation as a new run on the US dollar commences.

Conclusion

> *"One can try to trade what is effectively the simultaneous bursting of the 1st global sovereign debt bubble in 100 years, and the changing of the global currency system for the 1st time in 50 years, or one can buy gold and gold stocks unlevered... and trust that the US will not be the first sovereign in history that allows itself to go bankrupt for lack of printed money."*
>
> Luke Gromen

The potential events we have described could be the playbook for the next financial crisis, which will bring forth a new system based on far more government control of the economy than we are used to. If things play out in this way, the US's exorbitant privilege will be expended, setting in motion large structural changes not only in the US economy but by extension in the global economy as well. The Chinese economy, with all its weaknesses, will not cope well. Because of its high dependence on investments and exports, China is almost as vulnerable as the US.

Gold is a fuel that will perform wonders. But no fuel can work where there is no motor.
Midas Mulligan

Surprisingly enough, it is Europe that has the potential to come through this crisis *relatively* unscathed. Europe is clearly unbalanced internally, but not so much externally. If Europe manages to stay intact through the crisis, it will have the least amount of structural change to go through to adapt to the new world order.

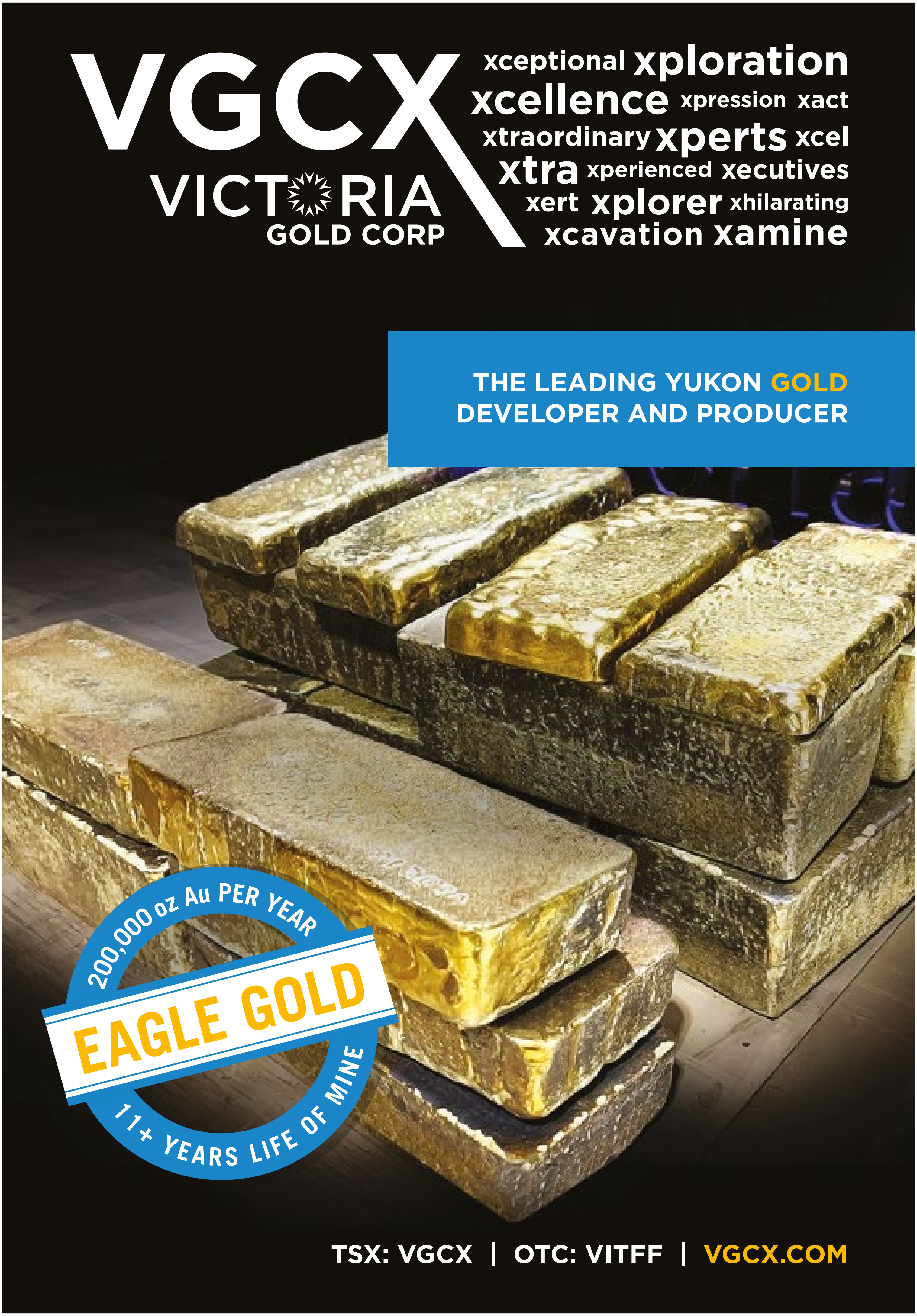
Monetary decline tends to coincide with the decline of governments and dynasties. Those who claim "this time is different" simply have no idea how much it is the same.
Nathan Lewis

A new monetary world order must be anchored to something tangible, and that tangible asset is likely to be gold. However, it is less likely to be a replica of the old system, but rather a gold backed digital currency centralized by one or several central banks. The PBoC has already launched their CBDC with aspirations to soon be used in international trade settlements and eventually even used as legal tender in jurisdictions outside China and between third-party countries. China may even retain control over their capital and financial accounts whilst internationalizing their digital renminbi. But for it to be trusted in a world with runaway inflation, it is paramount that it is anchored to gold.

New Gold Dream
Sun is set in front of me,
worldwide on the widest screen
New Gold Dream
Burning bridge and ecstasy,
crashing beats and fantasy.
Simple Minds, *"New Gold Dream"*

Capital controls will be easy to maintain when the world runs on digital central bank currency, and the fractional reserve banking system with its ebb and flow of fiat claims to fiat currency may be a thing of the past. Central banks can easily allocate and expand credit at will when every household and corporation have an account with its central bank, or even foreign central bank.

Competing central bank digital currencies is the natural next step, but when the dust has settled and new power structures are established, a global gold backed digital currency could emerge.


VGCX
VICTORIA
GOLD CORP
xceptional xploration
xcellence xpression xact
xtraordinary xperts xcel
xtra xperienced xecutives
xert xplorer xhilarating
xcavation xamine
THE LEADING YUKON GOLD
DEVELOPER AND PRODUCER
200,000 oz Au PER YEAR
EAGLE GOLD
11+ YEARS LIFE OF MINE
TSX: VGCX | OTC: VITFF | VGCX.COM

My View of the Nixon Shock – Exclusive Interview with FOFOA

"Severing the link between physical gold and XAU will usher in a new golden age that I like to call Freegold."

FOFOA

Key Takeaways

- The Nixon Shock 50 years ago marked the halfway point in the life of the US dollar-based financial system.
- FOFOA outlines four distinct periods in recent monetary history, and predicts we are now on the cusp of change.
- The gold market is currently run like a fractional reserve currency by the bullion banks, but we could soon move to a new system where gold is freely traded.
- There is a risk to the stability of "paper markets" for gold, which pose a systemic threat to the financial system.
- Gold will be freed of the fractional reserve banking practices of today. The monetary reforms this will lead to will result in a repricing of physical gold.

The whole interview with FOFOA is significantly longer. Thus, we are publishing the interview's highlights here and making the full version available for download on the following page:

https://ingoldwetrust.report/igwt/exclusive-interview-with-fofoa/?lang=en

Preface

To this day we don't know who Another was, where he got his information, and why he chose to share it with the world. But we do know one thing: Some (not all) of his sometimes-outlandish predictions did turn out to be true.

A little more than 20 years ago an anonymous writer who called himself "Another" appeared on the biggest gold discussion board the young internet knew at that time. He seemed to be an insider with deep knowledge of history, politics, and economics. He would go on to write for many years and had an heir, called "Friend of Another" (FOA), who took the torch once Another himself "retired". To this day we do not know who Another was, where he got his information, and why he chose to share it with the world. But we do know one thing: Some (not all) of his sometimes-outlandish predictions did turn out to be true.

Their body of work stretches from the Bretton Woods deal to the Nixon Shock and the introduction of the euro. It represents one of the most fascinating perspectives on the role of gold in the current and future monetary systems. **It also makes a compelling case for a much, much higher price of gold.**

The best-known student of Another and FOA is a blogger who calls himself "FOFOA", Friend of Friend of Another.

To this day people study their work to make sense of it and learn about the gold market. The best-known student of Another and FOA is a blogger who calls himself "FOFOA", Friend of Friend of Another. He has been working on the topic known as "Freegold" for more than a decade. FOFOA kindly agreed to do an interview for this year's *In Gold We Trust* report – his second with us, the first being in 2019. [1] We want to thank him for his effort and time, as this project was conducted over several weeks.

Here are the highlights of our conversation with FOFOA:

The Interview

Q: From your perspective, what happened in August 1971 when Nixon closed the gold window? (I think you once wrote that that was the first time Freegold was tried.)

Previously, the US dollar had been defined as a weight of gold, and the price of gold was thereby fixed to the US dollar, the same way you would fix the exchange rate of different currencies to the US dollar.

Yes, in a sense the Nixon Shock did set gold free from the US dollar. Previously, the US dollar had been defined as a weight of gold, and the price of gold was thereby fixed to the US dollar, the same way you would fix the exchange rate of different currencies to the US dollar. It also, however, gave birth to the modern concept of bullion banking. And that's what the *free* in *Freegold* refers to today – **the inevitable end of fractional reserve gold banking, which is simply a carryover from the pre-71 gold standard**.

The concept of a "singularity" is used in many applications as a point at which either a small change can cause large, sweeping effects, or else so much changes at once that the far side of the singularity is almost impossible to imagine.

The concept of a "singularity" is used in many applications as a point at which either a small change can cause large, sweeping effects, or else so much changes at once that the far side of the singularity is almost impossible to imagine. I like to think of it as passing through a black hole and emerging in a different world on the other side. So what I hope to do here is to give you a 30,000-foot view in which 1971 is both the halfway point in the 100-year life of the *International US dollar Reserve Monetary and Financial System* (the $IMFS) and also the first of two singularities, the second being Freegold.

The Genoa Conference, which gave birth to the $IMFS, was just over 99 years ago, and the Nixon Shock is virtually the halfway point between then and now. But this isn't just a story of the last century split in half by the Nixon Shock; **there are actually four distinct quarters in this story**.

$IMFS Q1

The first quarter, broadly, was the interwar period, or the period between the First and Second World Wars. It really had its economic ups and downs. It began with the prosperity and decadence of the Roaring Twenties; then the stock market crashed in 1929, followed by the Great Depression, the social welfare programs of the New Deal, and finally the devastation of World War 2, which set the stage for the second quarter to begin at Bretton Woods.

$IMFS Q2

Bretton Woods, the IMF, the World Bank, and the Marshall Plan were all structured to help Europe rebuild its economy after the war, by overvaluing European currencies and undervaluing the US dollar with fixed exchange rates. This allowed Europe to run a trade deficit with the US while it rebuilt its productive capacity.

The vast majority of people are actually savers as opposed to being real investors or traders.

That situation reversed around 1958, when Europe was back on its feet enough to start running a surplus while the US slipped into recession. That year also marked the beginning of the decline of US gold holdings, from 20,312 tonnes in 1957 down to 9,070 tonnes in 1971.

One of the pillars of Freegold is the concept of the saver. The idea is that **the vast majority of people are actually savers as opposed to being real investors or traders.** But in today's $IMFS, they are forced to swim with the sharks, so to speak. Today we call savings passive investment, but in Freegold everything will have changed for the savers – like passing through a singularity.

Something similar happened to the concept of the saver as it passed through the first singularity, the Nixon Shock. **One of the outcomes of the prosperity and growth of the 1950s was the concept of the defined-benefit retirement fund.** The idea was that you didn't need to save for retirement because your employer did it for you. The obligations this concept generated were based on an unsustainable growth model. It was the idea that the rate of growth in the 1950s would continue forever, and it became something like a Ponzi scheme. The collapse of the Studebaker Corporation[379] and its pension fund is a prime example, and **it gave birth to the idea of the individual retirement account.**

Q2 began with the promise of recovery, high growth and prosperity, and ended with a systemic collapse and broken promises.

The 1st Singularity

The 1st Singularity was inevitable. It wasn't an effect of what Nixon did, it was the cause.

There's a website called wtfhappenedin1971.com, and all it contains is about 50 charts that make it look like everything went haywire in 1971. And, in effect, everything did change. But from a systemic perspective, the closing of the gold window and the ending of the Bretton Woods monetary system were simply inevitable. **The 1st Singularity was inevitable. It wasn't an effect of what Nixon did, it was the cause.**

What happened in 1971 was bigger than Nixon. Yes, gold was set free from the US dollar, and Nixon gets credit for that. But systemic transitions of that magnitude simply become inevitable at some point.

The financial system changed as well. We went from the centralized obligations of defined-benefit retirement funds to the more distributed "defined-contribution" system of individual IRAs and 401Ks through the passing of the Employee Retirement Income Security Act of 1974. This had the effect of funneling everyone's savings into paper assets, giving birth to the massive bubble machine we call the financial system today.

What happened in 1971 was bigger than Nixon. Yes, gold was set free from the US dollar, and Nixon gets credit for that. But systemic transitions of that magnitude simply become inevitable at some point, and while we like to heap credit on those in power when they happen, **the reality is that they were going to happen anyway, no matter who was in the White House at the time**.

$IMFS Q3

An overarching theme of the third quarter was that, **following the Nixon Shock, Europe no longer trusted the US dollar reserve system**. They had just watched Bretton Woods collapse, and they didn't like the global economy being at the mercy of a single national currency that would eventually collapse and drag the world into another global depression.

The solution was to create a new international reserve currency that rivaled the US dollar in both size and scope. At least then, if the US dollar collapsed, Europe's economy wouldn't suffer as much. But these things take time. A lot of time, it turns out.

There are three points in Q3 when Another and his associates apparently worried that the $IMFS might collapse even before they could launch the euro. The first

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[379] *See* "The Studebaker Effect", Fofoa, January 11, 2012

was in 1979, when a group of European central bankers confronted Paul Volcker at the IMF meeting in Belgrade.

The Federal Reserve's actions four days later have been called the most significant change in the Federal Reserve's policy since 1932. But more importantly, the Belgrade confrontation marks the resumption of the dirty float, the European Central Bank's support for the US dollar, which had ended a year earlier in 1978. So while Volcker's actions made all the headlines, there was more going on quietly in the background, on the European side.

The Belgrade confrontation marks the resumption of the dirty float, the European Central Bank's support for the US dollar, which had ended a year earlier in 1978.

The second point in Q3 came in 1988. The US Dollar Index had reached a high of 164 in February 1985. The Plaza Accord, reached in September of that year, aimed to drive down the US dollar through coordinated exchange rate manipulation. **The stock market soared, while the US dollar declined.** Then the Louvre Accord, reached in February 1987, aimed to halt the decline caused by the Plaza Accord.[380] Eight months later was Black Monday, the stock market crash of 1987.

In a post titled "Some things I know", FOA wrote:

> *"This work [meaning what he and Another were explaining] 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… the effort you have seen to date is one of sharing somewhat for the common good of all."*

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.

What he was revealing there was that the view presented by Another beginning in 1997 was at least in part the result of a high-level "long-term evolving report" that had been commissioned shortly after the stock market crash of 1987. He continued:

> *"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."*

The third Q3 point was in 1996, and it was what led Another to start posting on the Kitco forum. An explosive jump in the volume of paper gold trading occurred in 1996 and was publicly revealed by the LBMA in the *Financial Times* on January 30, 1997.[381] To understand why this mattered to Another, and why it still matters today, we need to go back to the early 1970s and trace the evolution of the gold market following the Nixon Shock.

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380 *See* "History Does (Not) Repeat Itself – Plaza Accord 2.0?", *In Gold We Trust* report 2019
381 "Extent of global gold market revealed: London clears 930 tonnes of bullion each day", Financial Times, January 30, 1997

Gold's Transformation from Being a US Dollar to Becoming a Foreign (FX) Currency

The first step, after the closing of the gold window, came in 1974, when President Ford repealed FDR's ban on gold ownership in the US. Then, in 1975, COMEX gold futures began trading. **London responded to COMEX by giving birth to the bullion bank** and opening its gold market up to foreign banks that wanted bullion trading rooms in London.

In 1981, gold (and only gold) received its official ISO 4217 currency code: XAU. (XAG/silver, XPT/platinum and XPD/palladium were added years later.)

London responded to COMEX by giving birth to the bullion bank, and opening its gold market up to foreign banks that wanted bullion trading rooms in London.

In 1984, the pioneer of modern bullion banking, Johnson Matthey Bankers, also one of the London fixers, collapsed. In the aftermath, the Bank of England demanded that the bullion banks create a formal body to represent them as a group. And so in 1987 the LBMA was born. Around the same time, in the mid-1980s, CB gold lending and gold mining forward sales began, creating a new form of paper gold.

European central bankers apparently thought that keeping the price of gold under control was a necessary part of supporting the $IMFS until they could launch the euro, because, according to Another, **they enabled the massive expansion of this forward selling scheme by guaranteeing the paper with their own central bank gold.** The Saudi demand for real gold, which was greater than the available supply at the going price, was the big threat to the gold price at that time, and so a deal was made.

I say "end of the road" because, from here on out, we're in uncharted territory. There is no road, no trailhead, no tracks; we are completely off the rails and careening out into the great unknown.

This kept the prices of gold and oil, both of which were priced in US dollars, low when they otherwise would have exploded, as during the Gulf War in 1990 and 1991. And that's how this new paper gold market helped support the US dollar and the US dollar system through the 1980s and 1990s. **What was happening was that gold was being used as a foreign currency to hedge the $IMFS**, which ever since the Nixon Shock had evolved away from being used mainly for trade in real goods, and had become primarily a financial-asset trading arena – a bubble machine – which needed a hedge in order to continue its expansion.

$IMFS Q4

Courtesy of Hedgeye

Q4 runs from 1997 to present, and begins with the launch of the euro, Brown's Bottom, the dotcom bubble, and China's admission into the World Trade Organization in 2001. It continues with the housing bubble and its collapse, which caused the Global Financial Crisis and stock market crash in 2008, followed by a decade of monetary stimulus which brings us to today's everything bubble and the end of the road.

I say "end of the road" because, from here on out, we're in uncharted territory. **There is no road, no trailhead, no tracks; we are completely off the rails and careening out into the great unknown.** But I'm getting a little ahead of myself. Let's go back to the late 1990s and look at what changed during the transition from Q3 to Q4.

Brown's Bottom was when Gordon Brown sold off half of the UK's gold in a series of auctions, between July 1999 and March 2002. **That period marked the lowest gold prices in the last 42 years.** The purported reason for the sales was the diversification of the UK's reserves, away from gold and into foreign currencies including the new euro. But many believe the sales' true purpose was to bail out the bullion banks, which were running out of physical.

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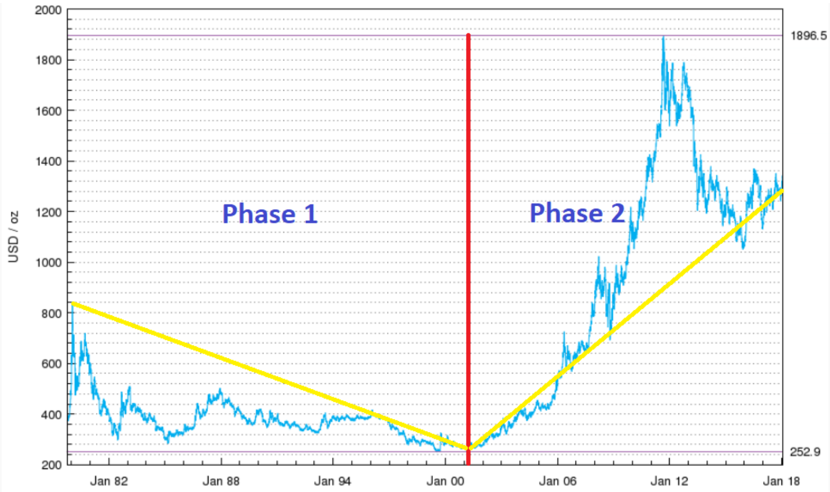
A few months after the first Brown's Bottom auction, 15 European central banks signed what was called the "Joint Statement on Gold" and came to be known as the Washington Agreement on Gold (WAG), or Central Bank Gold Agreement (CBGA). In short, **the European central banks agreed to limit their gold sales, but more importantly, they agreed to stop leasing.** This was important because it was the CB leasing that had supported the expansion of the paper gold market over the previous 15 years or so.

Also, it was the expansion of the paper gold market that caused the price to decline over time; so with the expansion halted, we entered a new phase in this paper gold market that had begun in the 1980s:



Source: "Comex is a Side Show", FOFOA, May 4, 2018

Europe stopped supporting the US dollar with CB purchases after the euro launched.

On the US dollar front, Europe stopped supporting the US dollar with CB purchases after the euro launched. **But in 2001, with its admission into the WTO, China ramped up its CB purchases in order to peg its currency to the US dollar.** By 2014, however, that US dollar support had ended. In fact, if we compare China's current US Treasury holdings with their peak in November, 2013, we see a reduction of USD 221bn, or 17% over the last seven years. And as far as I can tell, that's when the dirty float ended.

As for the financial system, Q4 compressed into a single image basically looks like this. **It's one bubble after another, ending in a superbubble**:

Source: Yahoo Finance

The Nixon Shock, i.e., the 1st Singularity, changed the financial system into a bubble machine; it changed gold from being defined as a US dollar into being a foreign currency; and it changed the US dollar from a unit used mainly for real trade into one used primarily for trading financial assets. In the process, **it changed the US economy from the world's greatest producer into the world's biggest consumer**, financial derivative production notwithstanding.

The 2nd Singularity

The Nixon Shock … changed the financial system into a bubble machine; it changed gold from the definition of a US dollar into a foreign currency itself, and it changed the US dollar from a unit used mainly for real trade into one used primarily for trading financial assets.

This section is about what I see, what I imagine is on the other side of the 2nd Singularity, which I think is just as inevitable as the 1st Singularity. It was going to happen regardless of who was in the White House at the time; but I must admit, it seems even more inevitable given the current administration.

I need to explain a simple concept about gold, however, before I tell you what I see. At the time of this writing, Bitcoin is right around USD 55,000 per coin, which is a number that I have long used for Freegold. Meanwhile, gold is down more than 15% from its high last August. So something I'm hearing a lot is that Bitcoin has done what gold was supposed to do; therefore Bitcoin is the new gold, or something along those lines.

I see this flawed premise everywhere: "Look at gold, it's down, it's not doing what it's supposed to do, which is rise against all this printing and monetary inflation like commodities and other inflation hedges." **But if we look back at history, that's not how gold works. And it's not what Freegold predicts.**

Historically, gold does its best work at transition points, not in day-to-day price movements. For example, when it was being used as part of the money supply, it didn't track price inflation, but every 40–50 years or so it would have to be repriced, or it would jump in price due to some sort of transition or crisis (e.g., 1934 and the 1970s). It has never really worked well as an inflation hedge. Everyone assumes it should, but I think that's a flawed premise, at least in the current system. **It's more of a transition hedge, or a singularity hedge.**

As Another liked to say, it will be repriced once, and that will be more than enough!

Gold has never really worked well as an inflation hedge. Everyone assumes it should, but I think that's a flawed premise, at least in the current system. It's more of a transition hedge, or a singularity hedge.

Bitcoin, on the other hand, is performing like the many bubbles throughout history. **And while bubbles do not perform well at transition points, they very often pop just prior to them.** I'm not making a prediction about Bitcoin here, just explaining a concept. We are in a pretty unique situation right now. We have this sort of traditional bubble dynamic in almost everything, where investors are starting to believe that asset prices can only go up, and are buying some of the strangest things. And at the same time, we have unprecedented levels of monetary inflation and stimulus, which are also pumping the bubbles in a more nontraditional dynamic.

So I think what we'll get in the end has to be a kind of hyperinflationary price collapse, where the price of everything that's in a bubble right now collapses in real terms, but not necessarily in nominal terms. That's "in the end". We could definitely see a nominal collapse of asset prices initially; but in the end, I think it'll be in real terms, which can be a lot worse than nominal.

As for the gold market, it is currently run like a fractional reserve currency by the bullion banks. I'm talking about the market where gold trades as XAU. It dwarfs other markets by an order of magnitude, and is therefore the primary driver of the price. You need only to think of it as a currency with its own banking system to see what's going to happen. It's not so different from what happened in 1934 and 1971.

As for the gold market, it is currently run like a fractional reserve currency by the bullion banks.

In 1933, there were paper US dollars and credit US dollars, and they were all backed by fractionally reserved gold US dollars. Then there were bank runs, essentially redemptions and withdrawals, that drained the gold from the banks, followed by a national bank holiday, which halted the redemptions and withdrawals. One month later, gold coins were called in and removed from the banking system, which was effectively a forced cash settlement of all US dollar balances at the old price of USD 20.67/oz. The link between the currency and the reserve was severed domestically. Then, once that was done, about nine months later, in January 1934, the reserve (gold) was repriced to USD 35/oz., almost a 70% increase.

In 1971, international US dollars were backed by fractionally reserved gold in the US Treasury, which was some of the same gold that had been removed from the domestic banking system in 1933. About half of the Treasury's reserves had been drained during the previous decade, and the rest could be gone in a flash, given the amount of US dollars held overseas. Then, **with a flood of fresh redemption requests coming in from Europe beginning in May of 1971, Nixon closed the gold window, ending redemptions altogether.** The link between the currency and the reserve was severed internationally. **The Treasury Dept. officially repriced its gold reserves in 1972 and again in 1973, but by then the definition of a US dollar as a weight of gold was meaningless.**

The Treasury Dept. officially repriced its gold reserves in 1972, and again in 1973, but by then the definition of a US dollar as a weight of gold was meaningless.

Likewise, the gold market today is dominated by a fractionally reserved paper gold currency trade, run by the same banks that also finance and manage the much smaller flow of the global physical gold market. The slack in that flow constitutes the fractional reserves of the system. Redemption and withdrawal of physical from this paper gold currency system is only possible at the margins, not en masse. So, when the financial system collapses, physical redemptions will cease and paper gold balances will be settled in cash at the paper price. The link between the currency (paper gold) and the reserve (physical gold) will be severed.

This is what I see coming on the other side of the 2nd Singularity. I think we're going to have a collapse, a reset, and a grand liquidation that will lead to a period of rebuilding, which will last perhaps decades. But it won't be the "Great Reset" agenda of the World Economic Forum (WEF). The collapse is going to include the collapse of such oversized, centralized thinking as the WEF, and the reset is going to usher in a more localized, resilient way of thinking. As Another put it, the old ideas of building solid, enduring, long-term wealth will return.

The collapse will be a collapse of the US dollar system, the financial system, and the paper gold market, and the reset will include the repricing of physical gold. I don't see the repricing as something that someone needs to enact, but more of a natural and obvious outcome of the collapse. **The "grand liquidation" will effectively pass economic assets from the old guard to the new generation, at fire-sale prices that will make them profitable once again, and the rebuilding of a more real and more robust economy will commence.** You might even call it a renaissance, or my preference, a new golden age.

The collapse will be a collapse of the US dollar system, the financial system, and the paper gold market, and the reset will include the repricing of physical gold.

My view of the Nixon Shock is that it marked the halfway point in the life of the $IMFS. And while it set gold free from the US dollar, it also gave birth to the modern concept of bullion banking, which entangled gold in a new kind of fractional reserve currency scheme. And as I wrote more than a decade ago, in a 2011 post titled "Freegold Foundations", that's what the *free* in *Freegold* refers to today – that gold will be freed from the fractional reserve banking practice, which is simply a carryover from the pre-Nixon gold standard. And that newfound freedom, **that severing of the link between physical gold and XAU, will usher in a new golden age that I like to call Freegold.**

The whole interview with FOFOA is available for download on the following page:

https://ingoldwetrust.report/igwt/exclusive-interview-with-fofoa/?lang=en

What Is Money?

"The public's understanding of what money is and its origins has devolved to the point where the government monetary authorities can now inflate with impunity, with the ultimate result to be the destruction of the division of labor undoing all of mankind's progress to date."

Doug French

Key Takeaways

- The question "what is money?" is seemingly simple, but if pursued in earnest it opens up many other questions, leading to a deeper understanding of human action.
- This question has many possible answers and interpretations, as money touches virtually everything in the sphere of human affairs.
- Like many other animals, human beings are a territorial species and express their territoriality in modernity by using private property rights.
- Gold remains the free market's preferred geopolitical money in today's world.
- By perfecting the properties of money, Bitcoin is a 12-year-old digital technology potentially disruptive to gold, which has a 5,000+ year track record as money.

About the author: Robert Breedlove is a freedom maximalist, ex-hedge fund manager, and philosopher in the Bitcoin space. Robert now hosts the "What is Money?" show, where he engages in deep conversations with some of the world's most prolific thinkers.

Money is the bubble that never pops.
Naval Ravikant

The question "what is money?" is deceivingly simple. One would expect the answer to be abundantly clear, given money's prevalence in daily life; but upon further reflection, most find money to be mysterious. Money is an all-pervasive economic ether, an interpenetrating field influencing human perception, thought, and action. Yet despite the "everywhere and nowhere" nature of money, its deepest truths remain hidden in plain sight. **Money is to man as water is to fish:**

> *"There are these two young fish swimming along and they happen to meet an older fish swimming the other way, who nods at them and says 'Morning, boys. How's the water?' And the two young fish swim on for a bit, and then eventually one of them looks over at the other and goes 'What the hell is water?'"*[382]

Friendship and money is like oil and water.
Mario Puzo

This is one way to conceptualize the answer: Money is "economic water"— a fundamental market reality that, perhaps because of its pervasiveness, is difficult to describe and understand in detail. To a fish, water is the substance which mediates the exchange necessary for all its biological activities: Its eyes require light radiating through water to see; its gills need water-dissolved oxygen to breathe; and its fins must be immersed in fluid to facilitate forward movement. In the eyes of a fish, water is the "medium of exchange", rendering the informational, energetic, and kinetic services sea-dwellers want. Similarly, money renders several services to market actors: It conveys market actor preferences (informational); it is the means by which market actors trade to satisfy wants (energetic); and by facilitating value exchange, it enables free enterprise to function (kinetic).

Emancipate yourselves from mental slavery. None but ourselves can free our minds.
Bob Marley

Allusion to the aqueous nature of money suggests there may be more answers beneath the surface – after all, water can be anything from commonplace and life-sustaining to uncontrollable and destructive, depending on one's circumstances. By continuously posing the question "what is money?" – not too unlike a toddler incessantly asking "why?" – we take aim on the deeper truths underlying this ubiquitous substance of human affairs. As more answers are uncovered, new questions come into focus and distance from truth declines. By clarifying different answers to this seemingly innocuous question and synthesizing the perspectives gleaned, a clearer comprehension of other etheric realities like exchange, markets, and spacetime emerges.

So let us earnestly ask the question "what is money?" and spelunk the depths of this interrogatory wellspring for fresh perspectives both economic and philosophic. From the great Austrian School of Economics, which has explored this question more seriously than any other scientific field, we find one answer: **Money is a universal medium of exchange.**

—
382 *See* Wallace, David F.: "This is Water by David Foster Wallace", April 2012

A Universal Medium of Exchange

> *"Money is the universally used medium of exchange, nothing else."*
>
> Ludwig von Mises

Praxeology is a theoretical and systematic, not a historical, science. Its scope is human action as such, irrespective of all environmental, accidental, and individual circumstances of the concrete acts.
Ludwig von Mises

Economics is a subset of Misesian praxeology: the science of human action. The inviolable first principle of human action is: Man must act. All action is directed toward the purposeful alleviation of anxiety, what Austrian economists call "the reduction of felt uneasiness." Action is directed at the solving of (perceived) problems, or what praxeologists call "the satisfaction of wants". Though small problems can generally be resolved by individuals acting alone, bigger problems require more human energy to resolve, for "many hands make light work".

This natural demand for assistance with problem-solving arises from the simple problem all humans face: individual limitations. The knowledge, experience, and judgement of each human is limited by the span of his or her life, talents, and training. Through social cooperation, humans achieve the division of labor – the most effective means of mitigating the constrictions imposed by individual limitations. Working in harmony, humankind economizes efforts to become greater than the sum of its constituents.

The meaning of life is to find your gift. The purpose of life is to give it away.
Pablo Picasso

Humans overcome the problems of inexorable individual limitation by engaging in the act of exchange. No matter which problems any human wants to solve, with the help of other humans more problems can be solved in less time. Free trade allows each of us to specialize more narrowly in production so that we all may enjoy a broader diversity of labor's many fruits. **The simple truth is: Humans are more productive in cooperation than in isolation.** Exchange is the connective tissue of humanity and, more fundamentally, nature itself. To this end, money is an indispensable tool: a universal medium of exchange. The functionality of free markets is only possible with money.

The Phoenicians invented money - but why so little?
Johann Nepomuk Nestroy

Since all individuals prefer wealth over poverty, free markets are a critical element of human affairs. As the source of virtually all want-satisfaction, the free market represents a vast, interconnected constellation of human productive energies and ingenuities. Money lays claim to everything market actors can muster, including time, knowledge, and commodities. **Which takes us to another answer to the "what is money?" question: Money is…**

The Most Marketable Good

> *"The commodities, which under given local and time relations are most liquid, have become money."*
>
> Carl Menger

As market actors work and trade with the aim of profitably satisfying one another's wants, certain goods become more tradable than others. To visualize this, picture the aggregate trade flows in the global economy as a sphere with a surface of highly liquid goods gradually giving way to less marketable layers of goods deeper down, finally becoming fully solid at its core, representing the world's least-traded goods. Bisecting this imaginary "trade flow sphere" reveals the many gradations of marketability (also called salability), with the most liquid assets at the surface of the sphere and those of decreasing liquidity gradually nearer its core.

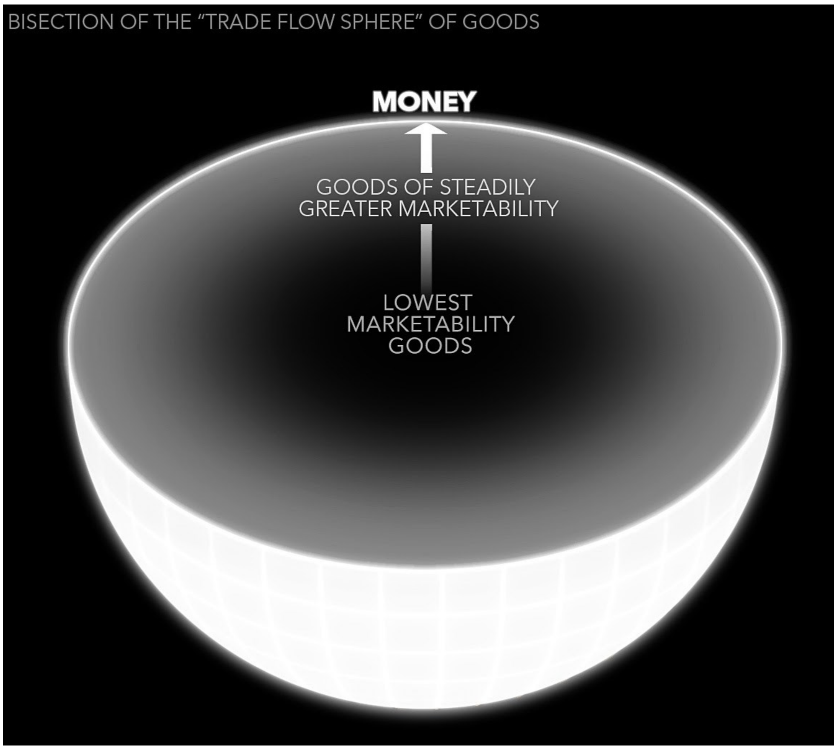


Photo Credit: Mike Hill

Man does not only sell commodities; he sells himself and feels himself to be a commodity.
Erich Fromm

Prices are the manifold exchange ratios among these many traded goods, expressed in money as a means of data compression. Goods with greater liquidity benefit from broader configurations of demand and thus higher prices, since there is an expectation of exchangeability with future market actors. The demand for every economic good is bifurcated between utility and marketability. Utility-driven demand is based on the productive or consumptive value the market actor expects to render from the good. For instance: The gold in computer circuits is due to a demand for utility whereas the gold in coinage is due to a demand for marketability. Marketability-driven demand is based on the future exchange value the actor expects the good to have in the marketplace, discounted to the present. The greater the marketability of a good, the more "moneyness" it exhibits by being more exchangeable or liquid in the marketplace.

In their striving toward aims, market actors naturally prefer goods exhibiting greater marketability, since this quality offers more degrees of freedom by laying claim to the efforts of others. Once the most marketable good is definitively established, all market actors prefer that particular good as the medium of exchange, as it can be used to trade for anything else in the marketplace with least effort. A self-reinforcing network effect ensues, further elevating the marketability of the most marketable good. Trading along the surface of this imaginary sphere is the good exhibiting the most "moneyness". In this sense money is the winner in the winner-take-most contest of marketability. As Mises writes of this game-theoretic progression toward *one* money:

> *"...an inevitable tendency for the less marketable of a series of goods used as media of exchange to be one by one rejected until at last only a single commodity remained, which was universally employed as a medium of exchange; in a word, money."*[383]

Money is the most liquid good in a trade network (or market), the highest layer of marketability in the bisection of the imaginary "trade flow sphere" depicted earlier. Money, then, is the highest expression of the free market: It is the most marketable good. In any place where humans trade, the good that is most tradable is money. This means money is an emergent property of interpersonal exchange, an inexorable outcome of free trade. As an economic concept then, money is a constant in the orbit of human interaction, although its specific implementation varies according to prevailing technological realities. Market actors across history have attached this concept of money to a diversity of economic goods. Reciprocated favors (debt), seashells, salt, cattle, glass beads, gold, and government paper have all ascended to the role of most tradable good at one or more points throughout history.

Never spend your money before you have earned it.
Thomas Jefferson

An important distinction, understood by few, arises here: All goods are services. Reading the term *economic good* probably conjures up a mental image of a tangible tool, an asset, or a consumable item. Economic goods can also be nonmaterial. Commonly called services, nonmaterial economic goods are where humans attach all value. **Market actors do not attach value to any physical qualities of a good, but rather to the services it can render.** A person's affinity for a specific sports car is not due to its aluminum frame or technical intricacy, but rather because it serves as a means of rapid transportation or as a socioeconomic status symbol. For this reason, all goods – material and nonmaterial – are best understood as services. What matters is a good's fitness for goal achievement, irrespective of its physical qualities, if it has any at all. In the pursuit of ends by way of means, humans value goods as means according to the affordances they are expected to contribute in the attainment of ends. In other words, humans only value services – the nonmaterial aspects afforded by goods.

Here, the question segues into a perhaps even more fundamental question: "What is value?" So we need to go deeper in our line of inquiry to understand why market actors attach the concept of value to various goods, **which leads us to our next answer: money is...**

—
383 Von Mises, Ludwig: *The Theory of Money and Credit*, 1953

A Device for Moving Value Across Spacetime

> *"Value is not intrinsic, it is not in things. It is within us; it is the way in which man reacts to the conditions of his environment."*
>
> Ludwig von Mises

Value is strictly a nonmaterial, relative quality. As humans set aims and take action in attempts to satisfy their wants, anything that accelerates them on the course toward their goal is "valuable", whereas anything irrelevant is "valueless", and anything impeding their progress is "anti-valuable". Value can never be objectively intrinsic to any tangible good; it is always determined by wants, which are inherently subjective. Said succinctly: Subjective human wants determine value.

Save money and it will save you.
Jamaican Proverb

When you decide to cross the street, you are expressing the decision that the other side is more valuable to you. All humans reveal their rank-ordered scales of value exclusively through action as each chooses the single most valuable course to them at the unavoidable exclusion of all others, in all places and at all times. Everyone expresses their unique value scales in the reality of action – indeed, there is no other way. Value is why "actions speak louder than words".

Without mathematics we cannot penetrate deeply into philosophy. Without philosophy we cannot penetrate deeply into mathematics. Without both we cannot penetrate deeply into anything.
Gottfried Wilhelm von Leibniz

If value is nonmaterial and subjective, how can money objectively move it across spacetime? The thread commonly woven throughout individual interpretations of value is human life. The fruits of human time, effort, and ingenuity produce almost everything other humans find relevant to solving their own problems. Therefore, an instrument commanding maximal marketability gives market actors the widest possible choice across the diversity of skills, knowledge, and capital commanded by other humans. When trading a good for money, the seller takes possession of a token that can be traded for any other good in the marketplace. As other market actors seek to satisfy their wants through trade, they eye the money held by the seller, and all others, as an accelerant toward achieving their own aims. In other words, when people trade, the most marketable good, i.e. money, has the highest probability of being perceived as valuable by others in pursuit of their own want-satisfaction. In this way, whether choosing to trade or hold a cash position, market actors use money as a device for moving value across spacetime. In receiving or spending money, a market actor moves value across space; by saving money, a market actor moves value across time.

Fascinating so far, right? All insights springing from diving into a seemingly shallow question. But value is such a subjective matter, how is it that money is anchored in objective reality? **Deeper we must go: money is…**

The Highest Form of Energy Humans Can Channel

> *"Man works in using his forces and abilities as a means for the removal of uneasiness and in substituting purposeful exploitation of his vital energy for the spontaneous and carefree discharge of his faculties and nerve tensions."*
> Ludwig von Mises

Life is the force which channels energy across spacetime toward the achievement of aims. Plants and animals channel energy toward the achievement of evolutionarily or instinctually established ends. Only humans have the unique and reflective capacity of reason, which enables them to sacrifice present consumption to the aim of higher achievement. Through self-reflection, economic planning, and purposeful effort, humans can forego present satisfaction and save with the intention of better satisfying the wants of their future selves. Sacrifice is the idea at the heart of economics, and it is the broader perspective on time that distinguishes human from animal. So far as we know, humans are the only living thing capable of channeling energy across the lines of ideological constructions toward the achievement of purposeful aims. **It is only by channeling energy through work that human ideas can be made manifest: Consider how humans turn blueprints into skyscrapers or hand-written constitutions into countries.**

There is an impulse inwrought in all living beings that directs them toward the assimilation of matter that preserves, renews, and strengthens their vital energy. The eminence of acting man is manifested in the fact that he consciously and purposefully aims at maintaining and enhancing his vitality.
Ludwig von Mises

In the process of achieving these higher aims, humans must energize more productive ideas with vaster pools of natural resources. Humans are the only life form known to isolate and manipulate the flow of energy as a tool. In the Stone Age, humans learned to wield fire, and over time forged it into an energy-tool useful for heating, cooking, and lighting. Later, other energy networks, such as flowing water, were harnessed through the work of human hands. By combining ideas and energy, humans unlock further innovations and richer energy sources, in a feedback loop spurring civilization forward. All human creations begin as ideas, which are generated through the expenditure of metabolic energy. Goods, then, are useful complexes of ideas and energy. As the most marketable good, money lays claim to all ideas and energy sources under the command of market actors. In modernity, money can be used to buy energy of any sort: thermal, hydro, or nuclear. Money is a "meta-energy": the highest form of energy humans can channel, since it represents a claim on all forms of human-harnessed energy.

On the free market, gold as money was linked to energy through the expense of its extraction, the original "proof of work" process reciprocating in gold the energetic sacrifices made in its obtainment. Following Bretton Woods, as the US dollar was gradually decoupled from gold, the US government was compelled by free market forces to indirectly tether its currency to "black gold" to uphold its preeminence in the marketplace. Mandating that all oil contracts were denominated in US dollars supported its demand in the geopolitical arena. Even a monopolist like the US government was forced to link its currency to an energy network to remain relevant, in this case the energetic life-blood of modern industrialism – oil. Absent this anchoring, regional currencies would have benefitted from consistent demand derived from the oil trade, thereby placing downward pressure on the dollar as a global reserve currency.

Nation-states hold dominant territorial monopolies on violence. Historically, state authority has virtually always been abused to monopolize money as a means of broadening its power base. **Conceiving the geopolitical implications of money leads directly into our next answer, money is…**

A Token of Territoriality

> *"Humanity and the soil – they are the only real basis of money."*
>
> Thomas Edison

Homo sapiens, like many others in the animal kingdom, are a territorial species. Staking out property, chasing off trespassers, and defending our homelands are all expressions of the deeply seated biological impulse known as the territorial imperative. Observations in the paleolithic record of widely dispersed hunting cultures confirm that utilization of exclusive land rights was a common occurrence among ancient humans. Similarly, many predatory species form "land-owning" groups: Lions, eagles, and wolves all violently guard exclusive hunting grounds. Although land ownership is not a human invention, the proclivity to represent this ownership in a symbolic form that is exchangeable with others is a uniquely human concept called property.

Several hundred million years of biological evolution have altered not at all the psychological tie between proprietor and property.
Robert Ardrey

Property is not any particular good. **Property is the socially acknowledged, exclusive right of an individual to control and render benefits from a good.** County land records, stock certificates, and UCC filings are all examples of property ledgers. Historically, the utility of these lists was limited by the trustworthiness of (corruptible) list-keepers: centralized entities that proprietors were forced to trust to guard the integrity of the list entries from error, duplication, and falsification. As the most marketable good in any economy, money is the most important private property right. Money is a "meta-property" that lays claim to all other pieces of property on the market. Since all property is a derivative of either a good, i.e. market actor time and the capital it produces, or a territory, i.e. the space controlled by a market actor, money is an icon of exchangeable spacetime. Territoriality is the tendency of life to forcibly seek dominion over specific regions of spacetime. Money is therefore a token of territoriality expressed in meta-property form.

Since property is a relationship, it is just information. According to natural law, the benefits of property ownership accrue to the individual who performed the work to make the underlying asset useful. Such accruals are the proverbial "fruits of labor". As meta-property, money is an informational tool that indicates who performed the work necessary to satisfy wants for market actors and has thus earned the right to redeem commensurate satisfactions from services rendered by other market actors. In this sense money is an information-bearing instrument that communicates to market actors who worked and what resultant property claims accrued.

Money is not an invention of the state. It is not the product of a legislative act. Even the sanction of political authority is not necessary for its existence. Certain commodities came to be money quite naturally, as the result of economic relationships that were independent of the power of the state.
Carl Menger

To be effective as money a good must be divisible, durable, recognizable, portable, and scarce. Divisibility is necessary to quantify property exchanges of different sizes. Durability prevents money from physical degradation over time. Recognizability means the veracity of the money is verifiable by unbiased means. Scarcity occurs when the demand for a good is greater than its supply, which is always true for money in a conceptual sense. As Aristotle said: "…for all getters of wealth increase their hoard of coin without limit."[384] The human appetite for money is insatiable, a hunger that has induced authorities across history to monopolize and violate money supplies in pursuit of selfish aims. **Game theory, not government decree, caused gold to be promoted into the role of geopolitical money.** Gold remains irrepressibly significant in worldwide socioeconomic affairs precisely because it is the only money governments have been unable to fully master.

Throughout history, the superior production difficulty of gold guarded it from supply manipulations, which imparted it with superior monetary scarcity. For money, scarcity is directly related to its supply inelasticity. If a money supply can be arbitrarily increased, then it will succumb to the shadow-tax of inflation and cease functioning as a reliable store of value across time. As a result, all else equal, the good with the most inelastic supply tends to outcompete all others and become money. Historically, precious metals were the most divisible, durable, recognizable, and portable monetary goods available. Of the precious metals, gold exhibited the most inelastic supply, meaning that no matter how much energy was allocated towards its production, its supply inflated the least, making it the best store of value available on the free market. Alas, because it is physical, gold cannot perfect the five properties of money.

Truth is ever to be found in simplicity, and not in the multiplicity and confusion of things.
Isaac Newton

Due to its portability shortcomings, gold traded alongside silver for centuries in a bimetallic free market standard; however, once precious metals were abstracted into paper, and later into electronic currencies, gold's portability was positively augmented. The introduction of gold-backed currencies diminished silver's relative advantage as a more easily transactable medium and caused its demonetization.

The problem with the implementation of any gold-backed currency is that it requires trust in the custodian not to issue more currency units than its gold reserves can justify. No trust relation has been more often broken than this: Virtually every time a gold supply has been centralized and monopolized, the currency issuer has soon started running a fractional reserve operation. In many instances, this operation skewed increasingly fractional, eventually reaching a zero-reserve fiat currency standard. **The latest iteration of the repeatedly failed fiat currency experiment is now in its 50th year – this time at a global scale and in a catastrophically synchronized geopolitical fashion.**

—
[384] Aristotle: *Politics*, 1257b

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

Fiat currency supply inflation is a violation of private property rights by central banks. When a legally insulated group can arbitrarily amend the meta-property of the world, the social cooperation of capitalism is jeopardized. Seeing money as a token of territoriality clarifies not only the encroachment of inflation on the property of others, but also the impetus of central banking as an institution. Conceived with the intent of steadily siphoning away wealth from productive market actors over time, central banking treats its private shareholders to a perpetual "free lunch" of stolen territory.

Like all other enterprises, central banking exists to execute on the territorial imperative of its shareholders. It accomplishes this by expropriating property from market actors at the expense of externalized uncertainty in the form of inflation, legal complexification, moral degradation, and warfare**. Such externalities are unavoidable due to the nature of money itself. Which brings us to the next answer: Money is…**

Uncertainty Insurance

> *"Only money, on account of its instant and unspecific wide-ranging salability, can protect him against uncertainty. Thus, just as insurance premiums are the price paid for protection against risk aversion, so cash holdings are the price paid for protection against uncertainty aversion."*
>
> Hans-Hermann Hoppe

In a system without change in which there is no uncertainty whatever about the future, nobody needs to hold cash. Every individual knows precisely what amount of money he will need at any future date. He is therefore in a position to lend all the funds he receives in such a way that the loans fall due on the date he will need them.
Ludwig von Mises

All action occurs in time, and the future is unknowable, yet those paying close attention can at times prognosticate accurately. Entrepreneurship is the art of adapting current production to the anticipated wants of future market actors. In dealing with the ineradicable uncertainty of the future, money offers its users an ideal "insurance policy" by laying claim to all problem-solving factors purveyed on the free market. **This means money is a call option on the time, knowledge, and capital of all other market actors.** As entrepreneurs set out to solve problems by combining productive factors in a way less costly than the price of the finished good they seek to sell on the market, they inevitably encounter the unexpected. No matter the adversity faced by entrepreneurs, money offers the best chance of solving their problems, as money is an instrument that commands the total problem-solving capabilities of all other entrepreneurs. **Therefore, money is the ultimate uncertainty insurance policy.** Monetary goods exhibiting greater assurance of rendering the relevant services discussed earlier – i.e. divisibility, durability, recognizability, portability, and scarcity – make for safer policies. In the sphere of money, certainty, i.e. credible monetary affordances, is the antidote to uncertainty, i.e. the endless vicissitudes of the market.

For 5,000 years, gold has served as humanity's most effective uncertainty insurance. But since the genesis block of Bitcoin in 2009,

gold has faced the uncertainty of digital disruption. Digitization optimizes all five affordances of money. Bitcoin is purely digital money, hence relative to gold its divisibility is supreme, as information can be infinitely subdivided and recombined at near-zero cost; its durability is supreme, as distributed information does not decompose; its portability is supreme, as information can move at the speed of light; and its recognizability is supreme, as information is the most objectively discernible substance in the universe. Finally, and most critically, since Bitcoin algorithmically and thermodynamically enforces a perfectly inelastic money supply, its scarcity is supreme. Taken in combination, these traits make absolutely scarce digital money seemingly indomitable in the marketplace. Of course, gold has a multi-millennia head start in the marketplace; therefore the outcome of this historic monetary transition remains uncertain.

To preserve their independence, we must not let our rules load us with perpetual debt. We must make our election between economy and liberty, or profusion and servitude.
Thomas Jefferson

Although Bitcoin seems to have perfected the affordances market actors seek from money, only time will tell whether it is truly disruptive to gold and all of its derivative geopolitical power structures, including nation-states and central banks. As uncertainty insurance, Bitcoin can hardly be rivaled in terms of the certainties it affords its holders. **It is commonly said that there are only two certainties in life: death and taxes. Bitcoin, however, has introduced a third: a fixed supply of 21 million units.** A monetary system governed by unbreakable rules and characterized by perfect supply inelasticity is the nearest thing to the economic concept of perfect information that history has ever known, making Bitcoin the perfect instrument for market actors contending with unknowable futures. Bitcoin offers humans a previously unobtainable level of certainty in the affordances money provides. **In a deep philosophical and practical sense, by virtue of being unchangeable, Bitcoin is radically changing the world.**

Now we are getting somewhere. Repetition is the mother of learning, and iterating this question keeps taking us deeper. Is there a bottom? What is the truth of money? **An unanswerable question perhaps, because money is a tool of discovery, and unending questioning is quintessential to discovery. Money is…**

The End of Economic Inquiry

> *"Your problems would be greatly simplified, if, instead of saying that you want to know the 'Truth', you were simply to say that you want to attain a state of belief unassailable by doubt."*
> Charles Sanders Peirce

As the American Pragmatists taught, truth is found "at the end of inquiry". In the sphere of human action, it is difficult to disentangle truth from that which is useful. An accurate map of reality will get us to our destination more quickly: Is this because the map is true, useful, or both? Any instrument that accelerates us along the path to the attainment of ends sought may be called a pragmatic truth. In this way, truth is invaluable, and free markets exist to promulgate pragmatic truths. Innovations that are successful in the marketplace represent particular convergence points of many branches of economic inquiry across spacetime. For instance, speaking pragmatically, the truth of digging holes manually is a shovel. After countless entrepreneurial experiments related to hole digging across history – with many variations on the tools intended to facilitate the attainment of this aim, including handle design, shaft length, step width, and blade shape – this ongoing sequence of economic inquiries currently ends with the shovel selection in hardware stores today. Clearly, the entrepreneurial process is continuous and the tools it generates are subject to further refinement, but at any given point in time and at any given price point, a tool successfully adopted in the marketplace is a pragmatic truth in and of itself.

One of the most nefarious consequences of dishonest money is to destroy our ability and willingness to act responsibly in light of our own judgments. It has led us to replace common sense by compliance.
Tony Deden

As the most important tool of market actors, money is subject to inquiry-driven refinement over time. As is true for any other tool, money that is freely selected on the market is a form of pragmatic truth. Whereas a shovel is the truth of digging holes, money is the truth of voluntary value exchange across spacetime. Of these two dimensions, money must first be successful at holding value over time before its spatial utility can be realized; as a money that cannot hold value over time will (self-evidently) not be freely selected to move value across space. Accordingly, the money that is successful on the free market, which emerges first as a superior store of value, is the end of economic inquiry. It is the most useful current result of countless entrepreneurial experiments with various other stores of value over time. On the free market, money is the highest form of pragmatic truth since it is redeemable for all other tools. Money is also the end of economic inquiry in another sense of the word *end*, as money is the end sought by entrepreneurial action. Some may argue that entrepreneurs work for other purposes, which may be true, but to be successful they must aim at profitability, which is a favorable balance of monetary inflows and outflows. Money, then, is the end of economic inquiry both as a discovered innovation and as its accumulation is the aim of entrepreneurial efforts. **Money is the end that further perfects other means in human action.**

With this final perspective on money in mind, we must ask ourselves another question: What is the free market signaling to us with the meteoric rise of Bitcoin? As the fastest growing asset in human history, could it disrupt gold to become the ultimate end of economic inquiry? An ingenious combination of incentives, mathematics, and work, Bitcoin is a monetary network that converts electricity into a singular, global, and indisputable truth. Events test the validity of ideas over time. To be verified is to become true. Self-verifying money, then, could quickly become an economically invaluable idea in a digital world. To quote the emphatic words of William James:

> *"Truth* happens *to an idea. It* becomes *true, is* made *true by events. Its verity* is *in fact an event, a process: the process namely of its verifying itself, its veri-*fication. *Its validity is the process of its vali-*dation.*"*[385]

In light of the truth surrounding this potential digital disruptor to gold, it seems wise to heed the advice of Satoshi: "*It may make sense to get a little just in case it*

—
[385] James, Williams: *Pragmatism: A New Name for Some Old Ways of Thinking*, 1975

catches on.”[386] Witnessing the transition from one age of human history to another is rare, and if you’re reading this then you are alive to see the Industrial Age give way to the Digital Age. Bitcoin ascending is where the line of inquiry into the nature of economic water currently stands, and only time will tell where truth will flow.

This Is Water

Hopefully, this small sample of the many possible answers to the question “what is money?” helps to expand your understanding of monetary reality. Life is a process of continual learning, and to grow requires a balance of developing awareness and accumulating knowledge. Knowledge is static and frozen, a symbolic aggregation of discoveries from the past awareness of others. Awareness is dynamic and current, the mode of being open to the revivification of old knowledge. **Awareness advances, while knowledge resists retrogression. Awareness asks, knowledge tells.**

I heard this story about a fish.

He swims up to an older fish and says, “I’m trying to find this thing they call ‘the ocean.'”

“The ocean? the older fish says, “That’s what you’re in right now.”

“This?” says the young fish. “This is water. What I want is the ocean!”

No destination or answer can deliver final satisfaction. The true treasures of life are found in the struggle, in the swimming upstream toward the valuable. And no matter when you read this or where you are, the journey always starts here and now, so be grateful for the adventure. As we advance our awareness by asking “what is money?” and choose to construct civilization out of the resultant knowledge, we must remember to keep reminding ourselves all along the way that “This is water”.

—
[386] Nakamoto, Satoshi: Bitcoin v0.1 released, Email dated January 16, 2009

Silver's Decade

"The Federal Reserve has survived the fifty-year-old trial of fiat currency, but that period is less than a heartbeat in world history. Central bankers remain on trial, and the uncertain verdict sustains the ancient role of gold and silver as storehouses of value in the new millennium."

William L. Silber, The Story of Silver

Key Takeaways

- **Silver's rally is likely to continue for the rest of the decade. We could be moving into an inflationary politician-led era of universal basic income, modern monetary theory, and government-guaranteed bank loan schemes. These trends will put upward pressure on the silver price.**
- **Silver is far and away the most heavily leveraged exchange-traded commodity. An August 2020 report by Macquarie put the ratio of derivatives to physical market at 193 for silver, compared to 86 for nickel and 74 for gold. This creates potential for a GameStop-style short squeeze on silver.**
- **The consensus opinion of professional silver analysts is that the world will broadly go back to the way it was before 2020. They are forecasting falling investment demand and lower silver prices for 2021–25, but we think they are mistaken.**
- **We believe the 'go back to the way things were' assumption will be proven wrong. The virus may have had little impact on silver sources, but it has had a profound impact on government and society.**

Introduction

Last year, the *In Gold We Trust* legal department paled when our first draft offered the following investment advice: "*Margin everything and buy silver!*". To placate them, we couched the message as: *"[T]his is history's greatest discount on one of humanity's most important and useful metals."*[387] Those words graced these pages after silver had just been valued as worth only 1/125th the price of gold.

It is weil warit they have sorrow, that buyes it with their silver.
Scottish proverb

The discount was truly the deepest recorded across the varied annals of humanity's many civilizations. The sale remains very steep, even today. With the gold/silver ratio averaging 68.6 since the beginning of 2021, there remains much profitable territory to traverse. As noted last year, in the climactic final year of previous inflation eras, the ratio reached for example 16 in 1980 or 31 in the year 2011.

Gold/Silver Ratio, 05/1971-05/2021

Source: Nick Laird, goldchartsrus.com, Reuters Eikon, Incrementum AG

Silver's advantage over gold is likely to continue for the rest of the decade, on the increasingly reasonable assumption that the world has exited the disinflationary, technocrat-led era of quantitative easing and entered the inflationary, politician-led era of universal basic income, modern monetary theory, and government-guaranteed bank loan schemes.

Humanity appreciates truth about as much as a squirrel appreciates silver.
Vernon Howard

And yet the professional analyst community[388] seems oblivious to the changes 2020 catalyzed! Consequently, they are forecasting that everything will go back to the way it was, and they anticipate lower silver prices and meek investment demand through 2025.

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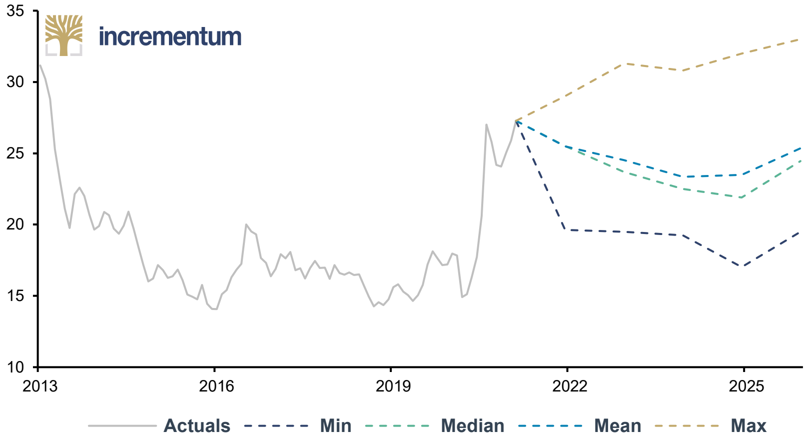
387 *See* "Silver's Silver Lining", *In Gold We Trust* report 2020
388 All references to "analysts" or "consensus" in this chapter refer to the author's collection of periodic commentaries produced by 19 different sources from: financial media, e.g. Bloomberg New Energy Finance; banks, e.g. Macquarie Strategy; consultancies, e.g. Metals Focus; industry associations, e.g. the Silver Institute; and government agencies, e.g. United States Geological Survey.

Silver Price Forecasts, in USD, 2015-2025e



Source: The Silver Institute, Reuters Eikon, Bloomberg, Incrementum AG

In response to that forecast please allow us to state – in terms that counsel says will obviate any liability – that it is disheartening how little faith professional forecasters have in politicians' resourcefulness and earnest desire to help millions… of registered voters.

Silver's Outperformance of Gold

Gold is the money of capital, silver the money of commerce.
Daniel Oliver

The US dollar price of both silver and gold peaked in August 2020, but whereas gold has been trickling lower ever since, silver has established a range. The difference can be explained simply enough, in that gold is a (the?) currency and silver is a commodity.

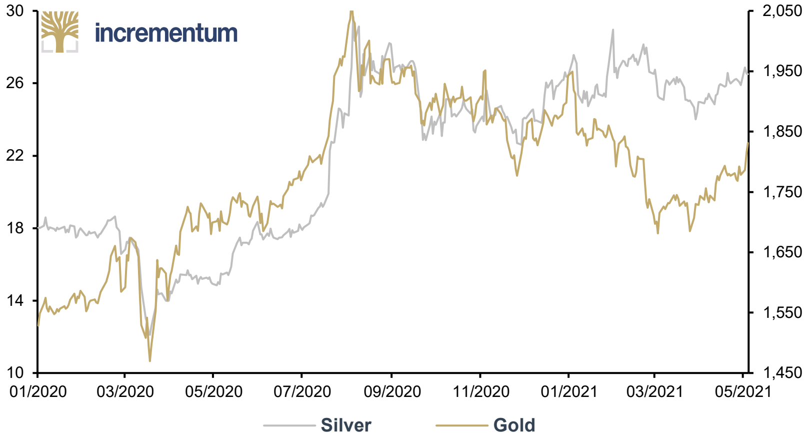
Gold and silver and sunshine is rising up.
Noel Gallagher

Silver's cool gray quenches investors during the hot days of economic summer, when real economic activity heats up and inflation burns bright. Conversely, gold's warm glow is prized most during economic winter, when business is in icy-cold deceleration, or outright contraction.

It is the latter condition that the world's 19 largest economies have inhabited for six of the last eight quarters, from the third quarter of 2018 through the second quarter of 2020.[389] During that economic winter gold outperformed silver.

[389] "Jeffrey Snider: Making Sense and Money Out of The Global Monetary Madness", Hedgeye Investing Summit, March 18, 2021

Silver (lhs), in USD, and Gold (rhs), in USD, 01/2020-05/2021



Source: The Silver Institute, Reuters Eikon, Incrementum AG

Courtesy of Hedgeye

Gold's nominal US dollar rally continued through the first month of the third quarter, but the worst of the Covid-19 crisis was now passing – the virus was not the Black Death, and draconian government lockdowns began to phase out. Four consecutive quarters of accelerating economic growth lay ahead (through the second quarter of 2021). **With an economic thaw it was silver's turn to outperform.**

I view gold as the primary global currency. It is the only currency, along with silver, that does not require a counterparty signature.
Alan Greenspan

Though both silver and gold were once monetary metals, the two elements have followed different evolutionary paths since the middle of the last century, and today they inhabit different financial ecosystems. Two out of every three ounces of gold demand is devoted to wealth preservation, demand by either central banks or households in the form of coins, bars and/or jewelry bought by weight. For silver that proportion is only one out of five ounces.

The reader may wonder if there exists an ecosystem where the two metals' preferred "financial ecotones" overlap? Indeed, there is: stagflation. When an economy's real growth rate decelerates as inflation accelerates both gold and silver – and commodities in general – appreciate nominally.

Covid-19's Impact on Supply in 2020

The following section evaluates how the professional precious-metals analyst community reacted to the events of 2020. How have they adjusted their supply forecasts for 2021–25? What implicit assumptions are they making about the state of the world? Are there risks that the consensus underappreciates?

Total silver supply was 950mn troy ounces (Moz) in 2020, a 5.6% reduction to 2019's total. The year took the analyst community by complete surprise, coming in at 98 Moz lower than forecast: equivalent to 9.3% of total supply.[390] **Total supply from primary, secondary and other sources was the lowest since 2009.**

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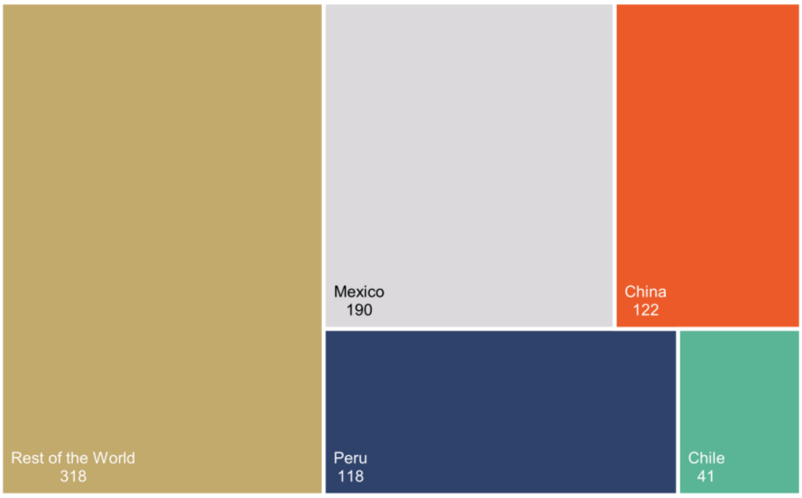
[390] When this article references the 2020 analyst consensus it is in reference to projections made in, or before, January 2020.

A combination of government-mandated shutdowns, on-site capacity reductions for social-distancing purposes, and logistical disruptions caused mine supply to come in at only 789 Moz, a 5.2% cut. The top producers of silver were Mexico, China, Peru and Chile, which in combination accounted for 59.7% of global mine supply.

Total Silver Mine Supply, in Moz, 2020



Source: The Silver Institute, Incrementum AG

Make new friends, but keep the old. Those are silver, these are gold.
Joseph Parry

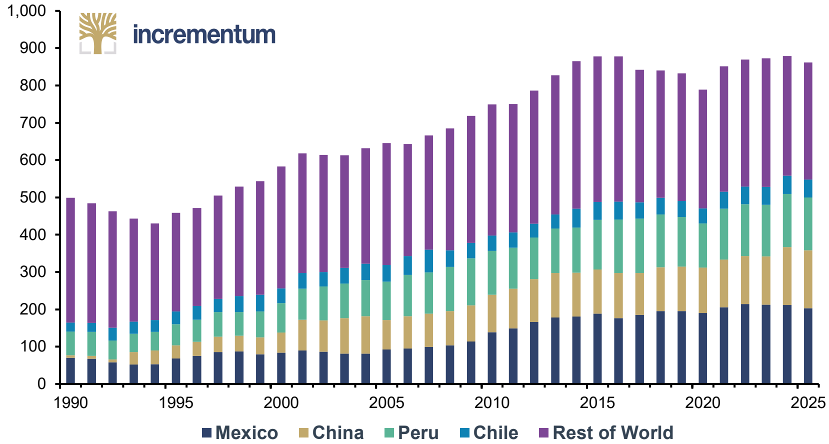
Secondary sources of supply, like industrial scrap or recycled jewelry, which account for 16% of supply in a typical year, were likewise underwhelming.[391] Secondary supply is shepherded to the market by one of three factors: industrial processing, price increases, or economic hardship. With industrial activity at a stop world-around for weeks at a time, one would expect less scrap from that source. But this should be offset by jewelry, silverware, and coin turned in due to surging unemployment and rising silver prices, which climbed from a low of USD 12 per troy ounce in late March to just under USD 30 in early August. On net, secondary supply fell 3.8% year-over-year to 158 Moz. Relative to forecasters' expectations the drop was steeper, a 6.0% loss to the pre-Corona outlook.

Covid-19's Impact on Medium-Term Supply

How has the virus, and more importantly, governments' and societies' reactions to it, changed how forecasters now see the first half of this decade? Overall, analysts have lowered their expectations by 112 Moz for total silver supply over the 2021–25 period, a 2.2% reduction. Total supply is expected to average 1,039 Moz per year. The five years prior to 2020 produced a total supply average of 1,018 Moz.

[391] The 2015-19 silver supply average is as follows: 83.9% primary mine supply, 16.0% secondary scrap/recycling, and 0.1% government sales and/or producer hedging.

Mine Supply by Country, in Moz, 1990-2025E

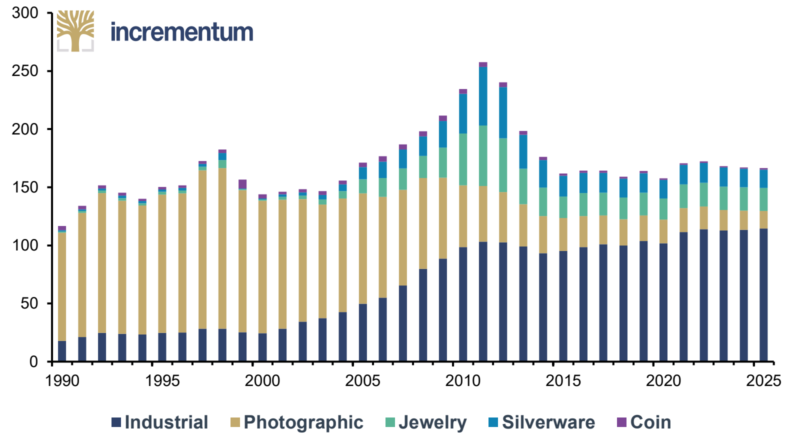


Source: The Silver Institute, Incrementum AG

Relative to 2020, pre-Covid forecasts, the consensus outlook for 2021–25 mine supply is now lower by 84 Moz. Though this represents a 1.9% reduction in expectations for the five-year forecast period, the 867 Moz annual average will be 1.5% more than the 854 Moz average achieved in 2015–19.

According to the consensus, secondary supply will contribute 169 Moz per year in 2021–25. That represents a total reduction of 21 Moz and 2.4% cut to expectations. The 2015–19 average was 163 Moz.

Secondary Supply by Sector, in Moz, 1990-2025E



Source: The Silver Institute, Incrementum AG

Points of Disagreement with Analyst Supply Consensus

It could be fairly said that the professional silver community does not believe the virus has had much impact on medium-term silver supply. During 2010–19 total supply was surprisingly consistent, only fluctuating between 999 and 1,064 Moz. The post-2020 forecasts have been reduced relative to pre-

Covid-19 expectations, but those expectations were at the upper end of the decade-long range.

We believe the 'go back to the way things were' assumption will be proven wrong. Though the virus may have little to no impact on the silver sources themselves, it has had all the impact in the world on government and society. That will translate to a higher price – a price that reflects the new inflationary era we have entered.

You must pay for everything in this world, one way or another. There's nothing free, except the grace of God.
Mattie Ross

We do not believe politicians, having tasted the sweet nectar of the magic money tree, will foreswear it in a display of stoic statesmanship. If it is election-facing politicians that will be determining money supply, and not appointed economists with bureaucratic tenure, silver will not stand idly by. Yet that is what the analyst community expects. The April 2021 analyst consensus forecast is for prices to fall throughout 2021–25.

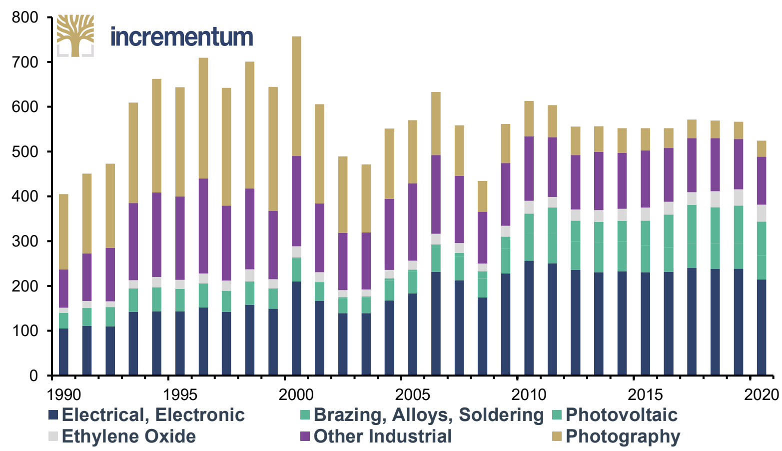
Increases in silver's price will likely result in more jewelry, silverware, and coin scrap supply than the analyst community expects. Similarly, mine supply, which is unable to accelerate as quickly, will likely be beating expectations by the end of the forecast period.

Covid-19's Impact on Demand in 2020

The following section evaluates how the professional precious-metals analyst community have adjusted their demand forecasts for 2021–25. What implicit assumptions are they making about the state of the world? **Are there risks that the consensus underappreciates?**[392]

The four main categories of silver demand are: industrial, photographic, decorative and investment. Year-over-year demand fell by 4.3% to 942 Moz and came in a whopping 8.1% below analyst expectations. It was the lowest total since 2009.

Industrial Demand, in Moz, 1990-2020E



Source: The Silver Institute, Incrementum AG

392 For a more in-depth review of demand end-use, *see* "Silver's Silver Lining", *In Gold We Trust* report 2020

Industrial demand comprises solar panels, biocides, ethylene oxide, electrical connectivity, electronics, and brazing, alloying and soldering with silver, along with countless other applications. It accounts for 51.3% of total demand.[393] Last year the market only drew 490 Moz for industry, a total first reached in 2005. The year-over-year contraction was 7.3%. Analysts had expected 533 Moz, an 8.1% forecast shortfall.

Photographic film has been in a long-term decline with the advent of digital photography. From a high of 209 Moz in 2000 the industry only consumed 35 Moz in 2020. Analysts had anticipated 40 Moz.

The virus felled the decorative segment to just 237 Moz in 2020, a level first reached in 1993. Analysts had predicted that 276 Moz of silver would be adorned on the body and wielded at the dinner table. That would have been at the upper end of the jeweler-silverware range of the 2004–19 period, which averaged 252 Moz per year.[394]

Then the Gods of the Market tumbled, and their smoothtongued wizards withdrew, / And the hearts of the meanest were humbled and began to believe it was true, / That All is not Gold that Glitters.
Rudyard Kipling

Investment – in our opinion the most important price driver for the metal – is our last segment, and the trickiest to measure. It undoubtedly exceeded demand expectations, but it's not entirely clear by how much. The segment contributes at least 18.0% to total annual demand. Looking at coins, medals and bars alone, the consensus expected 177 Moz in January of 2020 for the year ahead. When the year concluded, the figure is believed to have totaled 180 Moz.

What is not included in the above figures are changes in inventory held by exchange-traded funds (ETFs) or commodity exchanges. Estimates put the 2020 global ETF draw at 259 Moz, the largest in history. Commodity exchanges drew another 48 Moz, one of the largest draws in history.[395] If we added together coins, medals, bars, and visible financial inventories, then the total would stand at 488 Moz, the largest ever and on par with industrial demand.

Such a surge would correlate to the economic and social disorder we witnessed. It would be similar in spirit to the 118 Moz increase in 2006, the first year of the iShares Silver Trust exchange-traded fund. It would be akin to 2009, the first time this broad definition of financial silver breached 200 Moz and the last time the world was in such an economic hole.

Trading silver is a tough way to make an easy living.
Rich Ross

Unfortunately, it is not clear what proportion of these financial-market products drew on newly minted bullion and how much came from existing stock. Some market analysts put this line item of 'financial exchange silver' above the bottom-line balance of annual supply and demand, but other analysts leave it as a memo item.

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393 The 2015-19 silver demand average is as follows: 51.3% industrial applications, 26.5% decorative use, 18.0% investment bullion and 4.2% photography.
394 There had been an even more auspicious period for silver decorative use, from 1996 to 2003 the world consumed an average of 294 Moz, reaching a high of 310 Moz in 1999, just before the good times ended. People used to approve of pleasure.
395 We calculate 2016's 69 Moz draw as the largest.

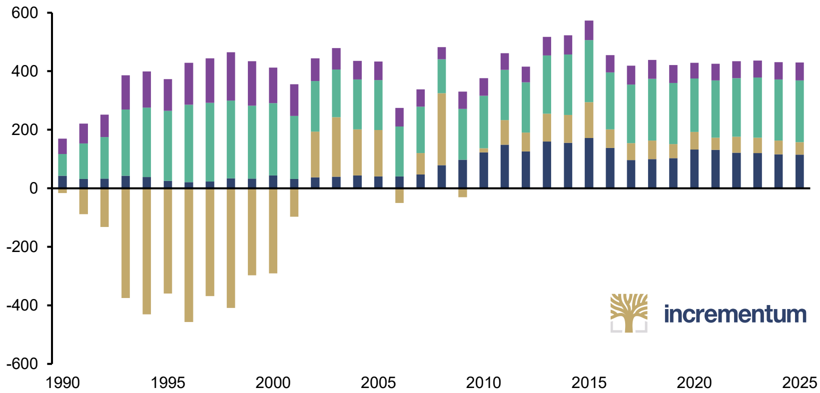
For our purposes, we can be satisfied in knowing that in 2020 investment was the only segment of silver demand that came in ahead of analyst expectations and grew year-over-year. This is true even if we entirely exclude ETFs and commodity exchanges.

Covid-19's Impact on Medium-Term Demand

Dear Optimist and Pessimist, while you were busy debating over whether the glass was half-full or half-empty, I drank it.
The Opportunist

To summarize, the analyst community is optimistic that the monetary disorder is behind us, necessitating no further increase in investment demand for the 2021–25 period. At the same time, seemingly in contradiction, they are expecting non-photovoltaic industrial demand to be worse than previously anticipated because the economy will not have recovered to pre-2020 trends. This assumption about a weak economy is corroborated by their forecasted decrease in decorative end use, which is driven in part by gross domestic product growth.

Change in Demand by Category, in Moz, 1990-2025E



■ Coins, Medals ■ Bars ■ Jewelry ■ Silverware
Source: The Silver Institute, Incrementum AG

Furthermore, analysts expect non-photovoltaic end uses to struggle while simultaneously expecting solar panel demand to rise faster than previously anticipated. Silver's "green power" has been increased by 31 Moz in total for 2021–25. Whereas previously an average of 86 Moz per year were anticipated, that has been moved to 92 Moz by the analyst community. Experts are predicting that industrial demand will account for a greater share of overall silver demand, rising to 54.4% of overall demand from 2015–19's average of 51.3%.

Photography has lost 10 Moz after Covid-19-inspired revisions. The dying segment is anticipated to die even faster now and only contribute 3.4% of demand per year on average (down from 4.2%).

Jewelry and silverware have been stripped by 68 Moz in this new consensus forecast. Instead of averaging 276 Moz per annum, we are told to expect 263 Moz annually for the decorative segment.

Investment, represented by coins, medals, and bars held outside of ETFs and commodity exchanges, is expected to be reduced by 14 Moz in total. The segment is being downgraded from 18.0% of overall silver demand to 16.5%.

Points of Disagreement with Analyst Demand Consensus

As suggested in the opening to the previous section, there is a disconnect in the analyst community regarding their acknowledgement that an economic disorder will continue to sap non-photovoltaic industrial demand, while at the same time they predict less investment demand. **Let us now review where silver investors can profit from misplaced expectations.**

By common consent of the nations gold & silver are the only true measure of value. They are the necessary regulators of trade.
Helen McCulloch

We believe that analysts think 2020 did not change socioeconomic circumstances and that the world will return to the pattern of the 2007–19 period, where central bankers retain the primary role as economic steward, with occasional fiscal forays by politicians. In such an environment, nothing will help the real economy or real demand, as has been the case in Japan since 1999 and in Europe and America since 2007. That worldview would make the consensus analyst forecast for industrial and decorative demand perfectly reasonable. But then why are they expecting investment demand not to rise if the socioeconomic malaise is to continue? The 2015–19 average for bars and coins was 183 Moz per year, and yet that is expected to fall to 169 Moz for 2021–25!

Never underestimate the ability of politicians to make the same mistake all over again, but usually giving it a different name.
Russell Napier

The events of last year have raised the stakes on a 13-year Silent Depression, which bears an unwelcome resemblance to the 1873–1896 Long Depression and 1929–1947 Great Depression.[396] Politicians sense this, as do their challengers. Therefore, we believe it entirely reasonable to expect an increase in industrial demand outside of just photovoltaic demand, because the incumbents or their challengers are greatly incentivized to assume the primary role of economic steward.

Silver Linings has proved a golden opportunity for me.
Anupam Kher

Government will also step forward to push green energy. Silver can benefit in one of three ways here. Firstly, via the continued use of silver in solar panels. A review of seven forecasts for the year 2023 shows a range of between 8.4% and 15.0% of silver supply being devoted to solar panels. The high end of that range would demand 40 Moz more ounces per year relative to the existing consensus forecast. It could happen. As we explained in last year's *In Gold We Trust* report, the history of the solar panel sector has been one where government drives demand. In the early 2000s it was Germany; then the baton was passed to Japan in 2011 and on to China in 2016. Who will anchor the solar panel relay? Perhaps the United States.[397]

Secondly, electric vehicles. For metal investors the focus is on electrification and battery materials, but that is not where silver's star shines. Instead, the metal is doing very well as part of a revolution in network connectivity, a broad term that captures the idea of the car as a rolling collection of sensors. Silver use has increased dramatically over the years because of the myriad electronic gizmos attached to and integrated with the vehicle: display screens, blind-spot indicators,

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[396] As explained in greater detail in last year's silver chapter, economic depression began in 2007 and has not stopped. A depression is not a very sharp recession, it is the inability to return back to the long-term growth trend that existed pre-crisis. A recession is a retreat from AND recovery back onto the growth path. A depression is retreat and then meandering growth. It is the lack of any economic upside. You may hear it referred to by other names like "lost decade" or "slowest recovery on record".
[397] *See* "Silver's Silver Lining", *In Gold We Trust* report 2020

tire-pressure sensors, et cetera. For vehicle manufacturers silver is a high-quality product and a minor cost to the overall car. Other than gold, silver is the metal family's best conductor of electricity.

Estimates put silver demand by the auto sector at 48 Moz in 2019. 2020 saw a reduction to 43 Moz owing to the Covid-19 recession. In 2016 the total was 45 Moz, which is indicative of the current lousy state of the global economy. In 2011 the figure was 20 Moz, and in 2006 it was 8 Moz. The analyst consensus is for this figure to incrementally rise to 71 Moz by 2025.

If politicians continue to offer a tax cut here or a spending program there, then the total just may remain more or less unchanged. However, if the rapid and comprehensive replacement of the combustion engine by electric cars were to occur, this would lead to a surge in demand for silver far in excess of the forecast 71 Moz.

The third ecological gain for silver would be a push into nuclear power. There are serious people who believe nuclear power is the antithesis of environmentally friendly. There are also serious people who argue that there is nothing greener than nuclear power. This is not the place to dwell on that debate, but we will mention that in 2018 CRU, the metals consultancy, estimated that nuclear power demand for silver was between 1 and 2 Moz per year.

The coming employment-heavy policies will need to be financed. Whether that is done via sovereign debt or modern monetary theory 'printing' or government-guaranteed loan schemes, in the end it is savers who will pay. Such financing will be a strong wind at the back of investment demand.

Silver GameStop Shorts

The other big event recently was the identification of silver as the next Reddit opportunity. Speculators, investors, day traders, and the most delightfully wretched collection of lovable rogues in all of finance inhabit the *wallstreetbets* thread.[398] They identified several stocks that were held very short. And they began to buy, hoping to tip the balance of the market in their favor. Over the course of just 4 trading days, the largest 10 physical silver ETF's added an additional 3,600 tonnes of silver. However, the GameStop story we will not repeat here – you have no doubt heard it explained already. **But one can see the result on this chart.**

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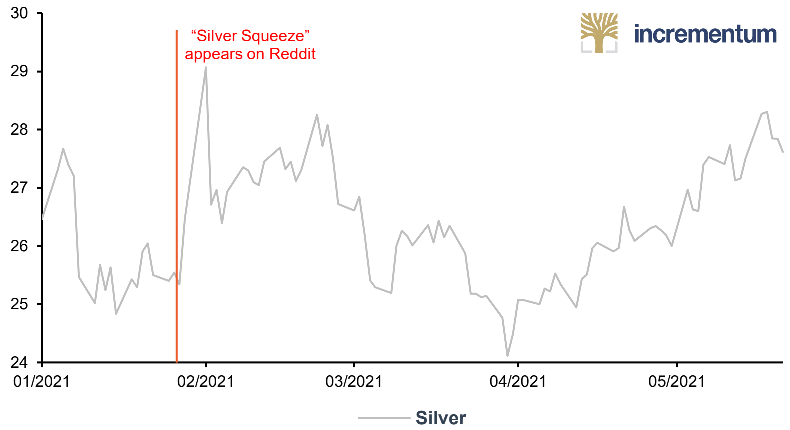
398 Reddit.com: r/wallstreetbets

Silver, in USD, 01/2021-05/2021



Source: Reuters Eikon, Incrementum AG

Immediately thereafter this stunning success, silver was identified as the next such opportunity. Why silver? As explained in last year's *In Gold We Trust* report,[399] the metal is far and away the most heavily leveraged exchange-traded commodity. An August 2020 report by Macquarie put the ratio of derivatives to physical market at 193 for silver. The second largest derivatives market relative to the underlying physical commodity was nickel, at only 86. Gold's ratio was at 74.[400] **It was no surprise silver was chosen.**

The two most powerful warriors are patience and time.
Leo Tolstoy

But what was the impact on the price of silver? Can you identify it in the chart? We cannot. There was apparently a serious difficulty in buying physical silver in coin and bullion form. Delays were reported. There are some analysts that dismiss this as excited buying, exacerbating Covid-19-related supply chain disruptions. 'Logistics', they say, not the storming of the Bastille and revolution of the people.

The warden said: The exit is solid.
If you want a way out Silver and Gold.
U2, *"Silver and Gold"*

Our sympathies lie with the 'villainous' Redditors. Yes, silver is ludicrously leveraged. Yes, the financialization of society and the economy is lurid. But no, the precious metals investor does not need to hope for the commodity exchanges to have their comeuppance to profit from silver. **The trends are in the metal's favor from a supply, demand, investment and inflation perspective. The decade ahead will likely show Wall Street Bets' heart was in the right place; they were just impatient.**

Conclusion

> *"Everyone's looking for gold. So, I'll be the one collecting the silver."*
>
> Rehan Khan, *A Tudor Turk*

Silver's rally is likely to last the rest of the decade, on the increasingly reasonable assumption that the world has exited the disinflationary, technocrat-led era of quantitative easing and entered the inflationary, politician-led era of universal

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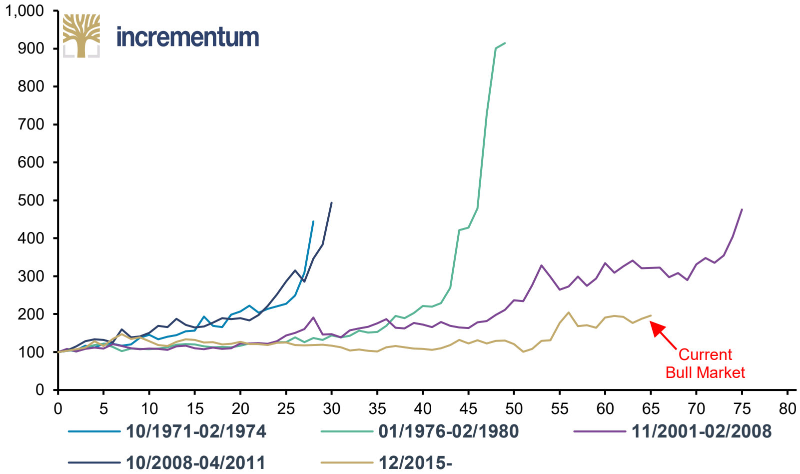
399 *See* "The Dawning of a Golden Decade", *In Gold We Trust* report 2020
400 *See* "Derivative Market Dominance", Macquarie, August 25, 2020

basic income, modern monetary theory, and government-guaranteed bank loan schemes.

In the post Covid-19 world the probability of a financial crisis does not mean that there will be a financial crisis. What it means is that there will be a financial repression with public support for private institutions, high inflation and yield curve control.
Russell Napier

This does not appear to be the broad consensus of the analyst community, which is forecasting falling prices. If 2020 will not bring about a change in the socioeconomic scene, then perhaps they are correct. **But if we are not going to back to the way things were, if last year represents a break with the existing political order, then an inflationary future lies ahead, and it'll be a decade during which silver performs well. If history is any guide, as our last chart shows, the "fun" part of the move in silver has not started. Yet!**

Silver Bull Markets, 100 = Start of Bull Market Cycle, 01/1971-05/2021



Source: Nick Laird, goldcharts.com, Reuters Eikon, Visual Capitalist, Katusa Research, Incrementum AG

Bitcoin & Gold – Our Multi-Asset Investment Strategy in Practice

"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."

In Gold We Trust report , 2019, p. 261

Key Takeaways

- We remain committed to our long-standing view that Bitcoin and gold are complementary assets.
- Although we believe that the role of digital stores of value will increase further, we do not expect Bitcoin to replace gold as a store of value.
- The live track record of our investment strategy consisting of Bitcoin and gold, has so far delivered outstanding investment results, meeting our high expectations.
- In our view, it is most effective to define a certain strategic allocation of cryptocurrencies and rebalance them regularly. This dampens the drawdown potential of cryptocurrencies within a portfolio and uses the volatility to the investors advantage.
- A combined crypto-gold portfolio seems to be particularly suitable for this purpose due to their relatively low correlation and the high volatility differential.

Never let the future disturb you. You will meet it, if you have to, with the same weapons of reason which today arm you against the present.
Marcus Aurelius

Back in 2015, we first included the topic of cryptocurrencies in our *In Gold We Trust* report. Since then, we have dealt intensively with this important topic in all its facets, devoting a separate chapter to it since 2016.[401] We continue the tradition this year. In our opinion, the increasing prevalence of cryptocurrencies in general and Bitcoin in particular has come about as a direct consequence of monetary climate change. Over the years, we have analyzed and reviewed a number of different aspects related to *digital gold* in our *In Gold We Trust* reports:

> *"Bitcoin and other cryptocurrencies are still in their infancy and it is very exciting to follow these developments. Time will tell whether other alternative currencies can establish themselves alongside gold in the long term, or whether cryptocurrencies will even usher in a new era with a revolutionized monetary system."*[402]

Many of our views on future developments eventually came to pass:

> *"Although Bitcoin and the underlying blockchain were originally designed to replicate the traits of gold that make it uniquely suited to be money, Bitcoin represents a unique asset class and can be an integral part of wealth management from the perspective of portfolio diversification."*[403]

Gold is bitcoin without electricity.
Charlie Morris

Recently, the advantages and disadvantages of gold and Bitcoin have once again been discussed among investors and in various debates.[404] However, we do not want to compare gold with Bitcoin again this year, as we have already dealt with this topic in detail in the past. If you are interested in our thoughts, we would like to refer you to the chapter "Cryptos: Friend or Foe?"[405] in the *In Gold We Trust* report 2018, an analysis that has lost none of its topicality:

> *"…as we have tried to show in this chapter, gold and cryptocurrencies do not have to be viewed as opposites at all. Of course, each has its advantages and disadvantages. However, they complement each other and there is no reason to play one off against the other."*[406]

I do wonder whether at this point, Bitcoin should also be thought of in part as a Chinese financial weapon against the US.
Peter Thiel

We remain committed to our long-standing view that Bitcoin and gold are complementary assets. Although we believe that the role of digital stores of value will tend to increase further, we do not expect Bitcoin to replace gold as a store of value.

In times of monetary climate change, the market for liquid, noninflationary assets is continuously growing. In the coming years, more and more capital will be looking for easily investable, quantitatively limited stores of value. In particular, rising price inflation rates and thus even lower real interest

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401 *See* "Gold-Backed Tokens in 2020 – A Glimpse into The Future?", *In Gold We Trust* report 2020, "Gold vs. Bitcoin vs. Stablecoins", *In Gold We Trust* report 2019, "Gold and Bitcoin: Stronger Together?", *In Gold We Trust* report 2019, "Crypto: Friend or Foe?", *In Gold We Trust* report 2018, "In Bitcoin We Trust?", *In Gold We Trust* report 2017, "Past, Present, and Future of the Monetary Order", *In Gold We Trust* report 2015
402 "Financial Repression: When the Grasping Hand of the State Runs Rampant", *In Gold We Trust* report 2016, p. 111
403 "In Bitcoin We Trust?", *In Gold We Trust* report 2017, p. 114
404 We also participated in a debate in this context and discussed with Saifedean Ammous, author of the book *The Bitcoin Standard*. The video of this conversation can be found here.
405 *See* "Crypto: Friend or Foe?", *In Gold We Trust* report 2018
406 "Crypto: Friend or Foe?", *In Gold We Trust* report 2018, p. 186

rates will further fuel the hunger for these value-preserving assets. In our view, being bullish on both assets is not a contradiction. On the contrary, a combined portfolio of digital and physical gold makes sense for many reasons. We expect these types of combined portfolios to be increasingly used, similar to how multi-asset portfolios now combine equity and bond asset classes. Here, too, a wide variety of combinations are conceivable, each of which can reflect a wide range of risk/return potentials.

Based on our conviction that portfolios consisting of precious metals and cryptocurrencies have an extremely promising risk/return potential, we have already launched two such investment strategies with different risk/return characteristics as investable mutual funds.[407]

Gold & Bitcoin – Stronger Together?

So to me, I think the real bogey, when you talk about, if the status quo continues, the real interesting thing is not Bitcoin eating gold, it's Bitcoin eating the bond market.
Luke Gromen

In this context, we would like to remind you of our contribution from the *In Gold We Trust* report 2019. In the chapter "Gold & Bitcoin - stronger together?" we pointed out in detail the advantages of a combined investment strategy of gold and Bitcoin.[408] Our suggestion was to combine the two assets in one portfolio and in case of strong deviations from the strategic asset allocation to return countercyclically to the initial positioning via an event-based rebalancing. For the rebalancing process, options can also play an important role to buy the underweighted assets by writing short puts and still achieve significant premium gains.[409] Analogously, covered calls can be written on the existing positions, which would have to be reduced anyway due to the overweighting.

The most important arguments for a rule-based, combined investment strategy at a glance:

- Reduction of volatility or of maximum drawdowns against cryptocurrencies
- Diversification effects and thus improved risk/return characteristics
- Maintaining an asymmetric payoff profile (right-skewed returns)
- Return optimization through systematic rebalancing (rebalancing bonus)[410]
- Significant cash flow income via an option writing overlay

Bitcoin reminds me of gold when I first got into the business in 1976.
Paul Tudor Jones

To substantiate these theses, we analyzed a quantitative back-of-the-envelope calculation of a combined portfolio in 2019. We came to the following conclusion:

> *"By combining both assets, the investor benefits on the one hand from the low correlation of both assets; on the other hand he can use the volatility of Bitcoin to his advantage through a rule-based rebalancing. In addition,*

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407 *See* "The fruit of our labour – Our investment funds", Incrementum AG
408 *See* "Gold and Bitcoin: Stronger Together?", *In Gold We Trust* report 2019
409 When writing a put option, the writer commits himself to buy an asset at a defined price at a certain point in time and receives an option premium for it. Since an additional purchase is planned anyway in the case of an underweighting a premium can be generated via the writing for a transaction which one intends to carry out in the case of falling prices.
410 *See* Bernstein, William: "The Rebalancing Bonus: Theory and Practice", 1996

option strategies are also applicable, which generate an interesting return by collecting the option premiums and further lower the volatility."[411]

Theoretical backtests should always be taken with a grain of salt when it comes to portfolio strategies. However, in the meantime, we have put the investment strategy into practice and have well over a year's worth of data available for analysis. The task is to find out whether the combination of the two assets has also delivered in practice, i.e. after deduction of all fees and any implementation discrepancies due to the liquidity situation, etc., that we had expected ex-ante.

Given a 10% chance of a 100 times payoff, you should take that bet every time.
Jeff Bezos

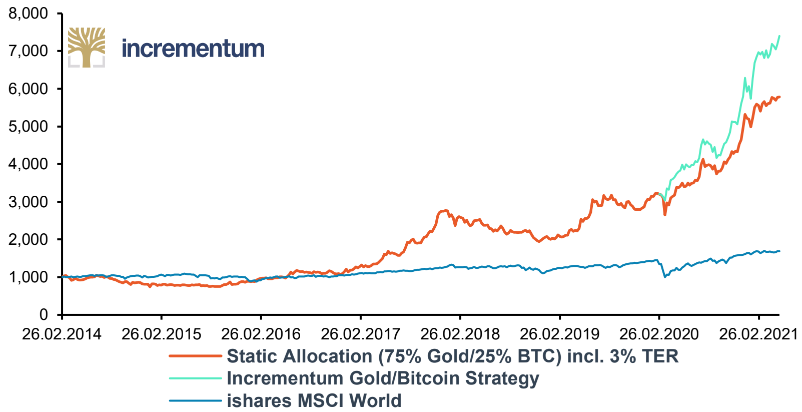
For the first investment strategy of this kind managed by us, we have chosen 25% Bitcoin and 75% gold as our strategic asset allocation.[412] When evaluating performance, we analyze all common risk/return ratios that allow risk-adjusted comparability of the price performance of the different investments. To ensure the best possible comparability, all ratios are based on logarithmic risk/return data.

Returns

History shows it is not possible to insulate yourself from the consequences of others holding money that is harder than yours.
Saifedean Ammous

Let's start with returns. We look at the historical returns of our strategic asset allocation compared to the returns of global equity markets. Additionally, we see the returns of the live track record of our strategy since the strategies launch on February 26, 2020.

Static Allocation (75% Gold /25% BTC) incl. 3% TER, Incrementum Gold/Bitcoin Strategy, and ishares MSCI World, 1,000 = 02/2014, 02/2014-05/2021



Source: Reuters Eikon, Incrementum AG

Since the launch of our strategy, the return is 131.2%. Gold posted a gain of 10.7% over the same period, Bitcoin of 520.9%. Our strategy was able to outperform the strategic asset allocation by 37.8 percentage points after deducting all costs.[413]

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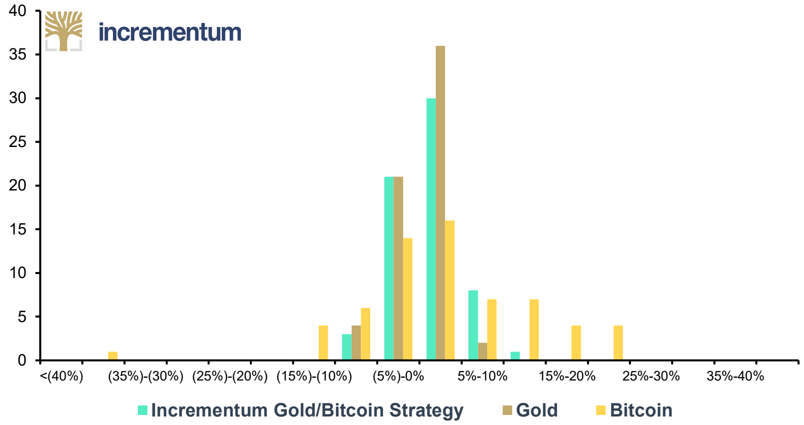
411 "Gold and Bitcoin: Stronger Together?", *In Gold We Trust* report 2019, p. 261
412 Meanwhile, we have launched a second, more dynamic strategy with a strategic allocation of 33% gold, 33% silver, and 33% cryptocurrencies.
413 All return figures as of May 14, 2021

Bitcoin looks like a long-duration option on a highly unknown future that I could put an amount of money into that I wouldn't mind losing about 80% of it.
Ray Dalio

Distribution of Returns

When it comes to the distribution of the returns, on the one hand one can observe that the strategies return distribution is similar to that of gold, except that it reflects the right-skewed nature of Bitcoin.

Distribution of log weekly returns of Gold, Bitcoin, and Incrementum Gold/Bitcoin Strategy, in %, 03/2020-05/2021

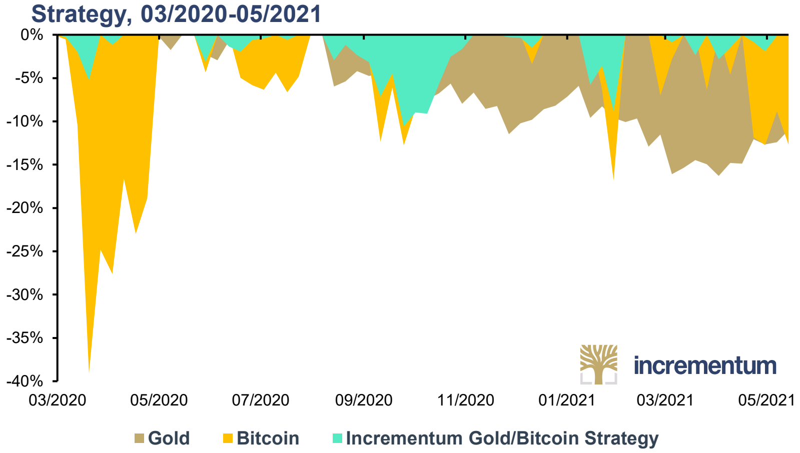


Source: Reuters Eikon, Incrementum AG

Risk

To assess risk, we look at the maximum drawdown. In our view, this is more informative than volatility, which does not adequately take into account any left-skewed moments in the distribution of returns.

Drawdown History of Gold, Bitcoin, and Incrementum Gold/Bitcoin Strategy, 03/2020-05/2021



Source: Reuters Eikon, Incrementum AG

Since the launch of our strategy, the "maximum drawdown" of Bitcoin was 39.1%, that of gold 16.3%, and that of our combined strategy 10.6%.

Because of bitcoin, we are witnessing a global battle among monetary systems, both sovereign and nonsovereign. As an open, neutral, and permissionless global monetary system with no reliance on the state, bitcoin is in a good position to win this battle.
ARK Investments

As discussed in the *In Gold We Trust Report* 2019, the combination of the two investments significantly reduced risk during the period under review. This is remarkable in that the strategy remarkably outperformed gold during the observation period.

A risk-adjusted comparability of returns can best be quantified using the common risk/return figures. Here, we have calculated the Sharpe ratio[414], the Sortino ratio[415], the Omega ratio[416], and the return over maximum drawdown (RoMaD).[417]

	Incrementum Gold/Bitcoin Strategy	Gold	Bitcoin
Performance discret	131.21%	10.73%	520.89%
Performance ln	83.82%	10.19%	182.60%
sd weekly	3.49%	2.71%	10.29%
Vol annualized	25.17%	19.52%	74.18%
Sharpe Ratio	3.33	0.52	2.46
Sortino Ratio	6.07	0.60	3.29
Omega Ratio	2.69	1.19	2.18
Skewness	0.17	-0.68	-0.68
Max DD	-10.59%	-16.30%	-39.11%
RoMaD	7.92	0.63	4.67

Source: Reuters Eikon, Incrementum AG

Bitcoin needs gold to exist. Gold doesn't need bitcoin to exist.
Roy Sebag

All the risk/return ratios of our investment strategy were *clearly superior* to the two individual investments for the period under review. *Of course, past performance does not allow any conclusions to be drawn about future performance.*

Conclusion

The technology undergirding bitcoin and other cryptocurrencies continues to develop. Like the laser, in its early days known as a "solution in search of a problem," cryptocurrencies and the blockchain could solve all kind of problems for us.
John Authers

We are convinced that a combination of selected cryptocurrencies – especially Bitcoin – within a diversified investment portfolio makes sense. The results achieved so far by our investment strategy clearly underline this thesis.

In our view, it is most effective to define a certain strategic allocation of cryptocurrencies and to rebalance them regularly. In this way, the high volatilities of the digital currencies can be dampened or used in favor of the investor. A combined crypto-gold portfolio seems to be particularly suitable for this purpose, as the relatively low correlation and the high volatility differential have a favorable effect on the so-called rebalancing bonus.

It is important to note, that past performance is no guarantee for future returns.

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414 The Sharpe ratio is the measure of risk-adjusted return of a financial portfolio. A portfolio with a higher Sharpe ratio is considered superior relative to its peers. It is measured as the excess portfolio return over the risk-free rate relative to its standard deviation.
415 The Sortino ratio is a variation of the Sharpe ratio that differentiates harmful volatility from total overall volatility by using the asset's standard deviation of negative portfolio returns – downside deviation – instead of the total standard deviation of portfolio returns.
416 The omega ratio is a risk-adjusted performance measure calculated as the ratio of probability-weighted profits and losses.
417 Return over maximum drawdown is the average return in a given period for a portfolio, expressed as a proportion of the maximum drawdown level. An investment with a RoMaD of 0.5 would be considered more attractive than one with a maximum drawdown of 40% and a return of 10% (RoMaD = 0.25)


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Gold Mining in China

***"In the golden shimmer how fair thou dost shine!
O come, lovely one, laugh thou with us!"***

Rhine Daughters, *Rheingold*, by Richard Wagner

Key Takeaways

- China's Gold mining industry is maturing. It aims to increase control of the whole value-add chain including exploration, mining, processing and trade.
- Beijing's long-term policies and initiatives such as the Dual Circulation, Made in China 2025, Belt & Road Initiative (BRI) or and the recently announced founding of the Regional and Comprehensive Economic Partnership (RCEP) are favorable for the mining industry.
- Mining companies remain controlled by government entities at all levels. The Dual Circulation policy and opening of the financial markets may lead to an increase in mining IPOs and further mergers, both nationally and internationally. This also means more opportunities for foreign investors.
- China's multi-industry companies often engage in gold mining. These are quite often construction companies, with interests in infrastructure development in Third World countries.
- The focus of Chinese mining outbound direct investments (ODIs) will be on Central Asia, the Asia Pacific region and Africa.

China's Gold Mining Industry at a Glance

"The currency the world ultimately chooses for global trade must not be one that gives someone privilege, while exposing others to insecurity."
Wang Zhe, CEO Shanghai Gold Exchange

It was in 2004 at the LMBA conference in Shanghai that the then head of the Chinese central bank, the PBoC, Zhou Xiaochuan, announced a three-stage transformation of the Chinese gold market:

> *"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. A complete financial market system will provide more solid and efficient micro grounds for China's macroeconomic adjustment. Therefore, China's aim is, through the three transformations, to establish a safe and effective system for gold trading and to give full play to the gold market's function of investment and risk warding, thus promoting the development of China's gold market."*[418]

Gold gathers more than a shovel.
Edward Counsel

Initially, the pure raw-material trade was expanded to include trading in financial products. By this move, market access became easier. Secondly, a futures market was established alongside the classic spot market. This improved the producers' liquidity situation and smoothed price fluctuations. Thirdly and finally, the integration of the domestic market into the international gold market not only opened up international capital and know-how but also made China an attractive destination for processing and trading gold and established the country as an influential and lasting player on the market.

In China everyone can buy Gold at the Shanghai Gold Exchange
Koos Jansen

In the past 17 years, stages one and two of Zhou's proposed transformation have been completed, and China is now on the threshold of implementing the third and final stage. There have been several recent policy announcements to this effect. Firstly, Chinese authorities announced that the Shanghai Gold Exchange (SGE) is opening to foreign investors. Thanks to the new free-trade zone in Pudong, these investors will be able to meet the SGE's requirement that trading only takes place in physically deposited goods, and they will also be able to remain compliant with China's export ban on gold.

It is important to protect the environment while pursuing economic and social progress – to achieve harmony between man and nature, and harmony between man society
Xi Jinping, World Economic Forum 2017

Secondly, it has been announced that China's mainly state-owned gold miners will be able to expand their international activities. They will be able to buy assets overseas and launch public offerings either directly or through subsidiaries. This will mostly happen in the form of double listings in Shanghai or Shenzhen, and Hong Kong. The A-shares of these companies will only be tradable by Mainland Chinese citizens, while the H-shares listed in Hong Kong will be available to international investors.

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[418] Zhou, Xiaochuan: "Give Full Play to the Gold Market's Investment and Hedging Functions", The LBMA Precious Metals Conference 2004, Shanghai, 2004, p. 10

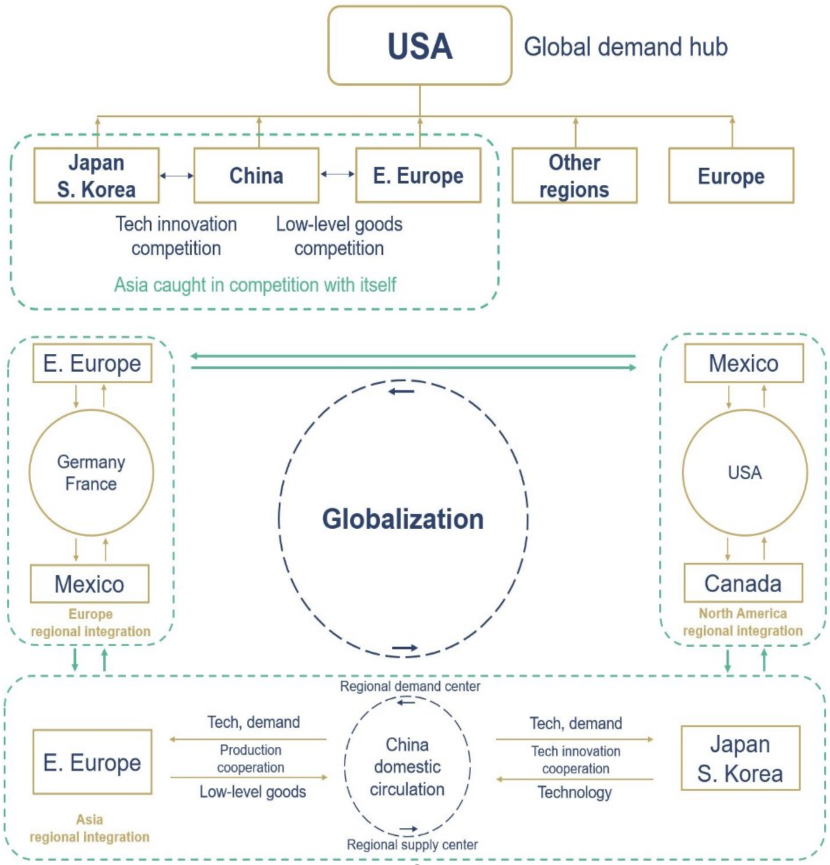
Political Concepts as Development Drivers

Another recent move by the Chinese government will speed up the opening of the People's Republic's financial markets. As part of the upcoming 14th Five Year Plan, Chinese President Xi Jinping announced a new policy known as "the Dual Circulation", referring to "internal" and "external" circulation of funds because of changes in domestic and foreign economic policy.

The communist country is pursuing capitalism while the world's democracies are pursuing socialism.
Dave Rosenberg

On the one hand, China aims to boost internal circulation of funds by boosting domestic consumption, becoming more self-sufficient, and attracting foreign investment. At the same time, China aims to improve external circulation by shifting its export focus from the mass production of cheap, low-quality goods to the production of innovative and high-quality products, with a special focus on advanced technologies.[419] While similar plans to boost domestic consumption were previously outlined in 2006 in the 11th Five Year Plan, the ongoing Covid pandemic and trade war with the US have shifted what was previously a long-term goal into a high-priority, near-term one.

The concept of dual circulation



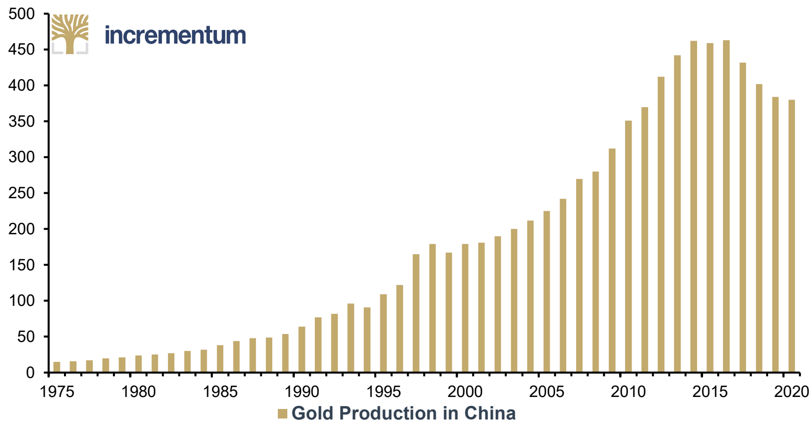
Source: ICBC International; Translation CNBC

[419] *See* Blanchette, Jude and Polk, Andrew: "Dual Circulations and China' New Hedge Integration Strategy", Center for Strategic and International Studies, August 24, 2020; Chang, Xuemei and Wanng, Keyuan: "The Standing Committee of the Political Bureau of the CPC Central Committee held a meeting with Xi Jinping, General Secretary of the CPC Central Committee, presiding over the meeting", People's Daily, May 15, 2020; Chen, Shu: "Improve the new national system of key core technology research and development", *Guanming Daily*, March 20, 2020

Real gold is not afraid of the melting pot.
Chinese proverb

In the near future, China wants to become one of the three global supply hubs for high-quality goods and services. Xi was addressing Chinese industry in general, but most of the decision makers in Beijing will focus on industries such as semiconductors, autos, and other high-technology areas. Still, China's dual circulation policy will strengthen China's growing and maturing gold mining industry because the opening of its financial markets will attract more capital and the focus will shift to the entire value chain: China is aiming for its gold mining sector to expand so that its activities include the whole gold production value chain, including exploration, production, smelting, and the crafting of bullion bars and jewelry. Chinese companies are already preparing themselves for this shift. Also, a shift from quantity (cheap, low-quality mass production) to quality (higher-quality goods and technology) has been happening for a few years.

Gold Production in China, in tonnes, 1975-2020



Source: China Gold Association, Metals Focus, World Gold Council, Incrementum AG

A drop of roughly 17% in production output since the 2016 peak is mirroring this shift. In addition, the Chinese mining industry is increasingly addressing environmental, social and governance (ESG) issues and as well as making efforts to modernize the technologies it uses. One should also keep in mind that China is in control of only roughly 4% of the world's gold reserves (in the ground) according to the US Geological Survey.[420]

Some of the central state-owned enterprises in certain industries are too fragmented and have low efficiency.
Xiao Yaqing
Chairman, State Owned Assets Supervision & Administration Commission

A further decline in Chinese production should not come as a complete surprise, although China itself claims to have resources of more than 13,000 tonnes – marking a huge 11,000-tonne gap between the Chinese numbers and the ones provided by the US Geological Survey. Given that China's total gold production may decline in absolute terms, addressing the whole value-add chain may be in China's gold industry's long-term interests. A lot of countries in China's neighborhood are relatively gold rich but lack both ordinary infrastructure such as roads or electricity support and gold-specific infrastructure such as smelters and sophisticated trading markets. Countries like Indonesia and Uzbekistan simply do not have international gold exchanges.

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[420] USGS: US Mineral Commodity Summary 2020, p. 2

Exploration by the Police

Until 2018, all gold exploration efforts in China were overseen by the Golden Force of the Chinese People's Armed Police Forces (中国人民武装警察部队黄金部队). The history of this unit began in the year 1979. In March of that year, shortly after Deng had consolidated his power, the Chinese State Council and Central Military Commission ordered a strengthening of national gold surveying and exploration capabilities. The Golden Force was founded for this purpose. It was first part of the infrastructure engineering corps and then, in 1985, it became a distinct arm of the People's Liberation Army (PLA). The unit had three main sources of funding: the central government, the China National Gold Group Corporation, and incentives: It received CNY 1.5mn for each 1,000 kilograms of gold discovered, paid by the province where the gold was found.

In 1999 the Golden Force came under the control of the State Economic and Trade Commission. However, after this ministry was disbanded, the unit fell under the command of the National Energy Commission. In 2009 the Golden Force was integrated into the Ministry of Land and Resources. When the ministry was dissolved in 2018, the Chinese Golden Force was disbanded. The entrepreneurial part of the force has since been integrated into China National Gold Corporation, and the rest of the unit has been demilitarized and is now part of the China Geological Survey under the control of China's Ministry of Natural Resources.[421] **During its existence the Golden Force discovered gold resources of at least 2,000 tonnes, which played a huge part in the dramatic rise of China's mining output.**[422]

The development of the Chinese mining industry led to a concentration of its activities. Like many other industries in China – the steel industry is notorious for this – the mining industry was originally extremely fragmented. This is due to the countless companies that mushroomed in the early years of China's reform efforts as a result of both government and private initiatives. At the turn of the millennium, over 2,000 gold mining companies were active in China. This number was halved within seven years thanks to aggressive takeovers, mergers, and acquisitions. Now there are less than 400 producers left. The four biggest mining companies now have a market share of roughly 60%.[423]

In addition to mergers within China's borders, Chinese gold companies are increasingly engaging in mergers and acquisitions overseas. This includes buying overseas properties on a large scale. These overseas activities support the objectives of China's Belt and Road Initiative.[424] In total, more than USD 6bn was invested in overseas projects in recent years, and roughly 2,000 tonnes of gold resources were thereby acquired.

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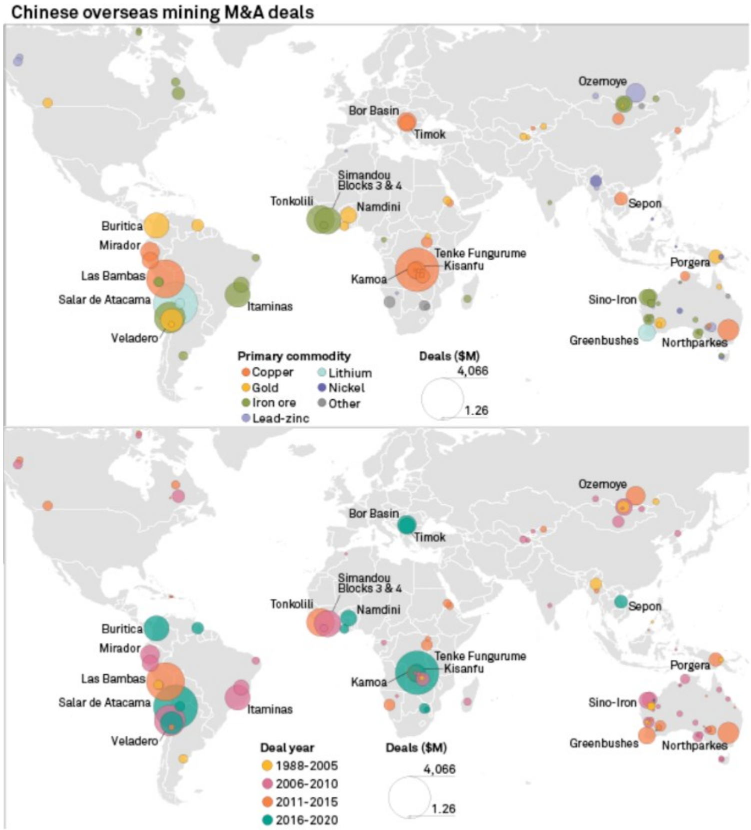
421 *See* Wikipedia: Chinese People's Armed Police Force Gold Unit, "Mysterious gold exploration unit of People's Armed Police", *The Chinese Times*, August 10, 2012
422 *See* Koos, Jansen: "China's Gold Army", Bullionstar, December 5, 2015
423 *See* Zhang, Yongtao: "China's gold mining industry: a story of growth", Gold Hub, World Gold Council, October 18 2018
424 *See* "Gold and the Dragon – China Stabilizes Its Ascent with Gold", *In Gold We Trust* report 2019

Chinese overseas mining M&A deals



Source: S&P Global Market Intelligence

One of the most active Chinese players is Zijin Mining. Founded in 1986, the company became a large conglomerate through the merger of several mining companies in 2000. Zijin owns properties around the world, including in Serbia, Congo, Peru and Tajikistan. In Colombia Zijin recently brought one of their mines into production. The focus of the group is on gold and copper. With reserves of around 1,750 tonnes of gold and 57mn tonnes of copper, Zijin owns around 13% of China's gold reserves and around 50% of its copper reserves. Through some spectacular takeovers, the company has become well known in the West as well.

In December 2018, Zijin bought Nevsun for around USD 1.4bn[425] and acquired Continental Gold a year later for around USD 1bn – the latter in the form of a cash offer.[426] In summer 2020 Zijin took over Guyana Goldfields for roughly USD 240mn.[427] As a consequence, Zijin now produces more gold outside of China than it does inside.

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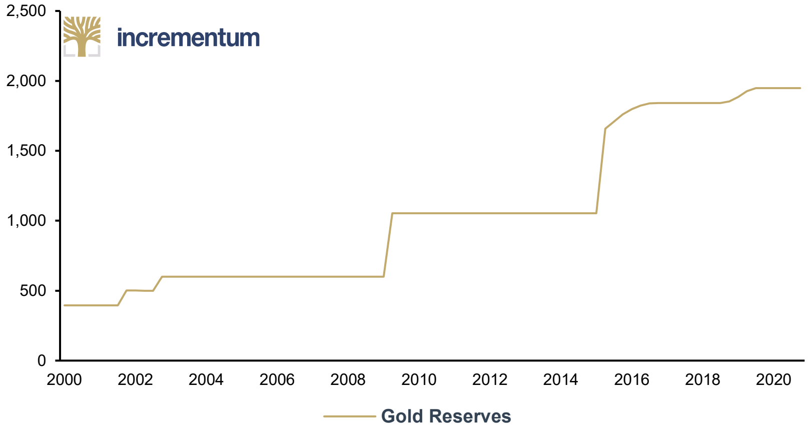
[425] *See* "Chinese firm Zijin Mining successful in takeover of Nevsun Resources", BNN Bloomberg, December 31, 2019
[426] *See* Aoyon, Ashraf: "Chinas Zijin Wins Over Canadian Miner With a Rare Cash Offer", Bloomberg, December 2, 2019
[427] *See* Chen, Jackson: "Zijin's Guyana Goldfields takeover backed by proxy firms", *Mining*, July 15, 2020

China Gold Reserves, in tonnes, 2000-2020



Source: China Gold Association, Incrementum AG

Zijin recently suffered a setback in Papua New Guinea, as the country's government refused to extend mining rights for the Porgera mine, which Zijin operates jointly with Barrick Gold.[428] This led to a loss in reserves worth roughly USD 1bn – a figure greater than Zijin's profits for the year 2020 of CNY 4.3bn (approx. USD 700mn). The company is listed in position 778 of the *Forbes Global 2000,* making it one of the biggest gold mining corporations of the world. The largest shareholder in the company is the Shanghang Minxi Xinghang Investment Company, which holds 24% of the shares in Zijin and is owned by the Shanghang Municipality, located in Fujian Province in southeast China.

The Chinese economy is the least badly affected of all economies this year and they buy a lot of iron ore. Whether we like it or not, the Chinese have done a less bad job.
Jim Rogers

Structures like this are typical for listed Chinese companies. Quite often government entities – independent of the level: central government, provincial, or municipal – hold shares of listed companies, and there are still many mining companies that are completely controlled by state entities. If the IPO regime in China is eased, we might also see more state-owned mining companies going public to finance further growth.

Zijin Mining Group, Stock price, in HKD, 01/2014-05/2021

Source: Reuters Eikon, Incrementum AG

428 *See* Xuan, Xiao and Jia, Denise: "China Gold-Mining Giant Zijin Fights Loss of $1 Billion-a-Year Papua New Guinea Mine", Caixin Global, September 5, 2020

This might be especially true for China's biggest mining company, China National Gold Group Corporation (CNG). The company is the only gold mining firm directly owned by the central government in Beijing and is run under supervision of the state-owned Assets Supervision Administration Commission of the State Council (SASAC). CNG is a conglomerate under whose umbrella many gold mines operate. Altogether 57 subsidiaries do exist, only two of them are publicly listed: Zhongjin Gold and China Gold International (CGI). Of the latter company CNG holds 30% of the shares. While Zhongjin is listed only in Shanghai, CGI is traded in Toronto and Hong Kong. Excluding only Hong Kong-listed companies, CGI is the only internationally listed gold mining company that owns mining properties in Mainland China. But CNG runs not only mines but also smelters and an extremely successful jewelry chain, Zhongjin Jewelery. There are also over 1,800 CNG franchise stores all over China, which sell CNG's investment products, especially bullion.

Directly or indirectly, CNG controls over 30% of China's gold reserves. CNG is the chair of China Gold Association and was the first Chinese member of the World Gold Council (WGC).[429] Shandong Gold, another big Chinese mining company, has also become a member of the WGC. The company is controlled by the government of Shandong Province and listed in Shanghai and Hong Kong. It is also on an aggressive expansion course: In May 2020 it offered almost USD 180mn for TMAC Resources. The offer was accepted by 97% of the TMAC shareholders, but the Canadian government rejected the sale in late December 2020. Instead of explaining its decision, the government merely recurred to the Investment Canada Act.[430] Given the tensions that have arisen during the last three years, after Canada arrested a high-ranking manager of Huawei on request of the US and China retaliated by arresting two Canadians, Canada's decision did not come as a surprise.[431]

TMAC is adding reserves and resources of 10-plus million ounces of gold at an extremely good price. And it's in an area we know well. We feel very comfortable with our ability to improve operations there and to find a lot more gold.
Sean Boyd
CEO, Agnico Eagle Mines

TMACs Hope Bay gold mine is in the Arctic area of Nunavut; and with climate change, new shipping routes may open up in the Arctic. Obviously, Canada assumed it was too risky to allow a company that is controlled by a Chinese government entity to have a stake in this strategic area. Only two weeks after the rejection of Shandong, Agnico Eagle made an offer TMAC could not resist. The senior producer purchased the company for more than USD 280mn. The deal was finalized in early February 2021.[432]

The failed purchase attempt is another example of tougher dealings between China and the West. It is highly likely that more and more Chinese takeover attempts will be rejected by Western governments – not only in the technology fields but also when it comes to commodities and especially when mining companies have properties in strategically important areas. It will be interesting to see how this goes along with China's slow but steady progress of opening up and its attempts to attract more foreign capital into the Mainland.

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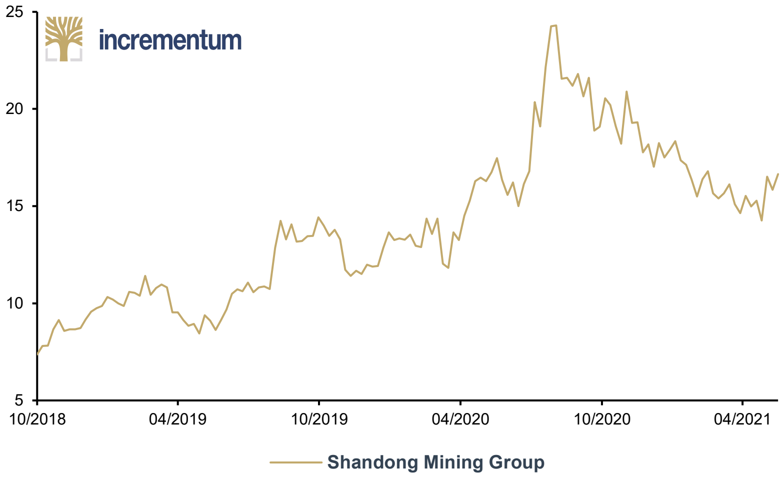
429 *See* World Gold Council Member operations
430 *See* Strong, Walter: "Ottawa blocks Chinese takeover of Nunavut gold mine project after national security review", CBC, December 22, 2020
431 *See* "U.S. "deeply concerned" as China starts Canadians' trials in secret", *MSN News*, March 23, 2021
432 *See* "Agnico Eagle Mines Limited Completes Acquisition of TMAC Resources Inc.", MarketWatch, February 2, 2021

China is taking over Brazil, and that is worrying. They are investing in mining, agriculture, energy, ports, and airports. China is not buying in Brazil; it is buying Brazil.
Jair Bolsonaro
President of Brazil

In Argentina, Shandong was more successful than it was in Canada. In 2017 the Chinese paid almost USD 1bn to Barrick Gold for a 50% interest in the Veladero gold mine. Since then, there has been an interlinking of shares with the US group: Both companies own shares in the other worth roughly USD 300mn. The company also operates mines in Inner Mongolia as well as in the Chinese provinces of Gansu and Fujian. In addition, the Xiling Mine in Shandong is China's most productive gold mine. The company estimates the mine to have at least 380 tonnes of reserves and property worth USD 22bn. Last year, Shandong Mining contributed around 6% of the total gold production in China.

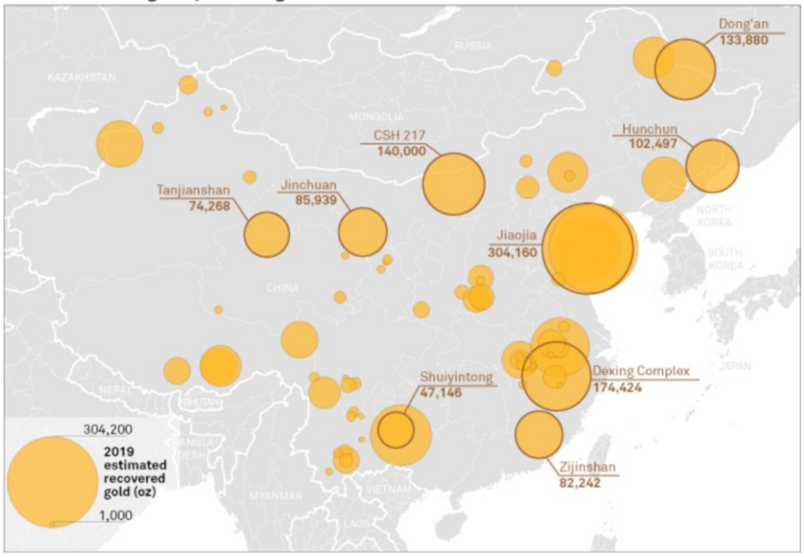
Shandong Mining Group, Stock price, in HKD, 10/2018-05/2021



Source: Reuters Eikon, Incrementum AG

Shandong Province is one of the most gold-rich areas in China. It is hardly surprising that other gold mining companies have their headquarters there, too. They include Zhaojin Mining, which focusses solely on production in China. Zhaojin has a total of 16.4mn ounces of gold reserves and another 39.6mn ounces as resources. In the year 2020, the company’s profits did more than double: the earnings per share rose from CNY 0.15 in 2019 to CNY 0.32. In total Zhaojin earned in the last year CNY 1,34bn before taxes. For the current year, the management expects revenues in same range as this year (CNY 7.65nb), but at slightly lower margin. Zhaojin not only extracts gold but also generates additional income by renting its smelters to other mining companies.

Active Chinese gold-producing mines



Source: S&P Global Market Intelligence

Focus on Africa and Central Asia

Due to initiatives like the BRI and the Dual Circulation, China is positioning itself as a hub for processing raw materials and ores. A good example is the recently built factory of Vale, the biggest iron ore producer in the world, in Ningbo, where the Brazilian company is exclusively producing its most modern product for the Chinese steel markets. Vale's competitor Rio Tinto has announced a similar move. Especially regarding the mining production in Central and Southeast Asia, China will become more and more important: The gold ore will be processed in China before being sold at the SGE.

When I was growing up, my parents told me, 'Finish your dinner. People in China and India are starving.' I tell my daughters, 'Finish your homework. People in India and China are starving for your job.'
Thomas Friedman

Interestingly, many Chinese conglomerates are investing in mining companies, and some even own mines themselves. Imagine the German construction company Hochtief AG purchasing a Chilean silver company – that would create a lot of raised eyebrows because of Hochtief's operating outside of their business field, but Chinese companies do not have these restraints. For example, the Shanghai Construction Group (SCG) holds via its international arm, Shanghai Corporation for Foreign Economic & Technological Cooperation (SEFCO), 60% of the Eritrean gold mine Zara Gold. The Sichuan Road and Bridge Group (SRBG) is another Chinese construction company that owns mining property, in Eritrea. In South Africa, the China-Africa Development Fund runs the Modderfontein Gold mine close to Johannesburg, together with the metal trading company Bayin.[433] This is another example of how Chinese companies are aiming to control the whole value chain, from extraction to processing to trading.

Of course, these investments also give China more influence and leverage in the countries where their gold-mining firms operate. It is no wonder that most Chinese mining outbound direct investments (ODI) are concentrated in the Asia Pacific region and Africa. Especially the latter is more

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433 Ericsson, Magnus, Löf, Olof & Löf, Anton: *Chinese control over African and global mining— past, present and future*, *Mineral Economics*, February 10, 2020, p.159ff

open to – and also in more need of – foreign (Chinese) investment and is not too occupied with prejudices towards the Chinese. Of course, here also the growing Chinese influence raises concerns; but it is nothing compared to the concern in Europe, where the European Commissioner for Competition, Margrethe Vestager, explicitly recommended nationalization of companies as a way to avoid Chinese takeovers.

Central Asia is also a focus of China's gold mining industry. It is one of the core regions of the BRI; and, given their secluded location, joining and supplying a maturing and growing Chinese gold mining industry is an attractive prospect for Central Asian republics.

Conclusion

> *"The Chinese mentality was not understood then either in Europe or America: Europe was at the pinnacle of world power, full of confidence in the present and future, and Europeans found the Chinese amusing for their rejection of paper money and their practice of weighing metallic currency on scales. People presumed that the Chinese were five generations behind us – in reality they were a generation ahead of Europe."*
>
> Felix Somary, The Raven of Zurich, 1913

China's mining landscape is strongly developing and, on its way, to internationalizing and professionalizing its operations. With a growing and broadening investment landscape and political initiatives like the BRI and the recently announced Dual Circulation, there are reasons to be optimistic about the future of the Chinese gold mining industry. More strategic acquisitions are to be expected, especially in Central Asia and in the Southeast Asia Pacific region along the BRI routes, as well as more IPOs for financing these takeovers.

As China's financial markets continue to open up to the rest of the world, further opportunities will also open up for international investors in the long term – although this could be a lengthy process, especially as Western companies are becoming increasingly reluctant to invest directly in China. Nonetheless, the long-term prospects for the Chinese mining companies are bright.

Golden Opportunities in Mining

“Price is what you pay. Value is what you get.”

Warren Buffett

Key Takeaways

- 2020 saw a considerable improvement in the financial position of gold and silver miners.
- In 2020, producers had their most profitable year ever. The average spot gold price increased to USD 1,770/oz., but average industry AISC — representing the cost of mining — remained flat.
- While gold prices have enjoyed a substantial two-year rally, the valuation of gold miners does not yet reflect their greatly increased profitability.
- M&A was a major theme in 2019, which would have continued in 2020 were it not for strict travel restrictions. Nonetheless, M&A will be a key theme going forward.
- We expect gold and silver mining companies to generate record-high free cash flows in 2021 and beyond.

Introduction

"There's nothing you can do that can't be done
Nothing you can sing that can't be sung
Nothing you can say, but you can learn how to play the game.
It's easy
Nothing you can make that can't be made
No one you can save that can't be saved
Nothing you can do, but you can learn how to be you in time
It's easy
All you need is love."

The Beatles

"Mining Stocks: The Party Has Begun" was the title of last year's *In Gold We Trust* report chapter on mining stocks. Since then, senior mining stocks (HUI) have risen by 23% while the juniors (GDXJ) are up by 26%. We concluded:

> *"There are still few sectors that are more underweighted by the investment community than the mining sector. This is demonstrated by the almost dwarfish market capitalization of mining stocks. In this respect, we expect that the mining companies – and their shareholders – will reap a rich harvest in the next few years after a grueling dry spell.* ***But now it is up to the industry to deliver on the promises it has made in recent years, to build new investor confidence and attract generalist investors****."*[434]

The gold industry is now a real business.
Alex Black

One year on, we can fairly say that the industry has delivered. The value proposition of the miners has done nothing but improve.[435] Much of what was said in last year's issue regarding mining stocks remains the case today. The biggest change has to do with just how disconnected valuations of gold stocks have become relative to their cash flow. Remarkable undervaluations have gone largely unnoticed as investors focus on cryptocurrencies, SPACS, Reddit-induced squeezes like GameStop, and of course FAANG stocks. This lack of focus on gold is substantiated by the fact that Dogecoin – a satirical homage to bitcoin, designed to serve no real purpose other than generating a few laughs[436] – in May had a higher valuation than Newmont Mining and Barrick Gold. However, at some point, generalists and value investors will rediscover the value proposition of the mining sector. **To quote the Beatles, all you (they) need is love.**

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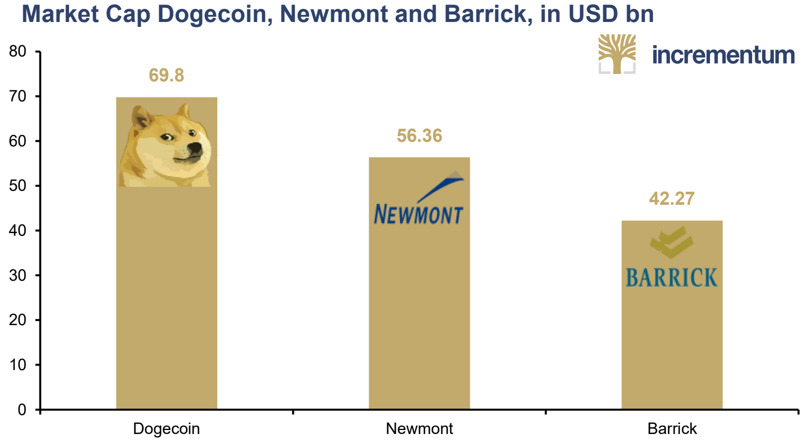
434 "Mining Stocks: The Party Has Begun", *In Gold We Trust* report 2020, p. 300
435 *See* chapter "Mining Stocks and Real Interest Rates: An Unsurprising Relationship" in this *In Gold We Trust* report.
436 *See* Ostroff, Caitlin and McCabe, Caitlin: "What Is Dogecoin, How to Say It, and Why It's No Longer a Joke", *The Wall Street Journal*, May 10, 2021



Source: Reuters Eikon (as of May 14th, 2021), Incrementum AG

I feel like an oversexed man in a harem. This is the time to start investing.
Warren Buffett, October 1974

Over the last 12 months, the *In Gold We Trust* team has conducted more than 120 company meetings. Attending these (virtual) mining conferences, we sometimes felt like we were attending deep value forums. To us, it is clear: the gold and silver mining industry is in the best shape it has been in in a long time, at least since we started researching and investing in mining stocks 15 years ago.

2020 – The Year in Review and Status Quo

"Markets tend to return to the mean over time."
Bob Farrell

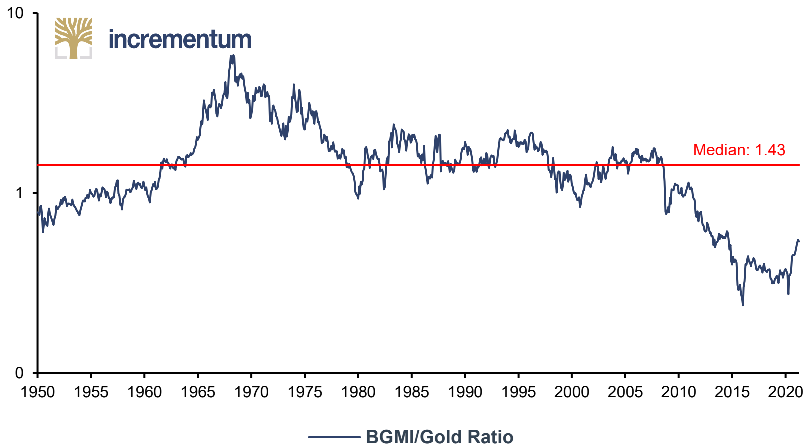
To us, redeployment of a portion of general U.S. equity exposure to gold shares at this juncture represents a non-consensus portfolio allocation with extremely high probabilities for success.
Trey Reik

Before looking further at mining stocks' performance in recent years, it is worth briefly looking at the industry from a longer-term perspective. The following chart depicts the performance of mining stocks (the XAU Index) relative to equity markets (S&P 500), illustrating clearly how low mining stocks prices are.

Source: Reuters Eikon, Incrementum AG

This underperformance of mining stocks is particularly apparent if we make an even longer-term comparison. The oldest available gold mining index, the Barron's Gold Mining Index (BGMI), is currently trading at 0.53, close to the lowest level in 70 years and far below the long-term median of 1.43x.

BGMI/Gold Ratio (log), 01/1950-04/2021

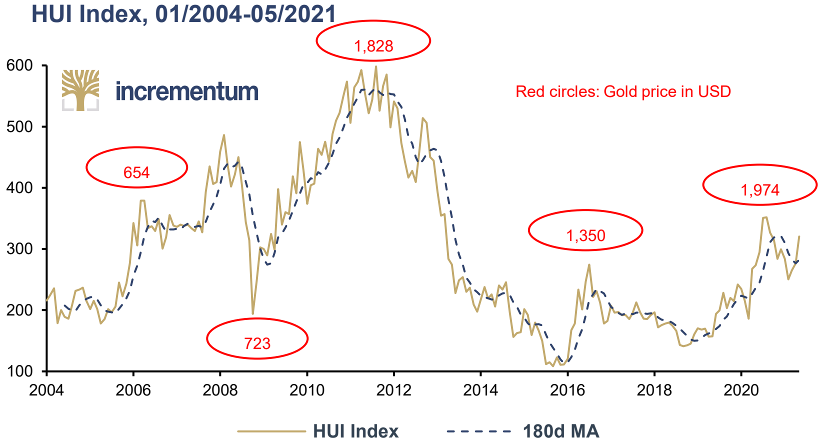


Source: Reuters Eikon, Nick Laird, goldchartsrus.com, Incrementum AG

All we need is just a little patience.
Guns N' Roses, *"Patience"*

Now, what happened in the last 12 months? The HUI peaked on August 5th at the 360 level and since then retraced down to a low of 250 in March 2021. It is worth noting that the HUI is currently trading at the same level as in 2016 when the price of gold stood on average at USD 1,350. The additional USD 500/oz. translated into significant margin and cash flow expansion.

HUI Index, 01/2004-05/2021

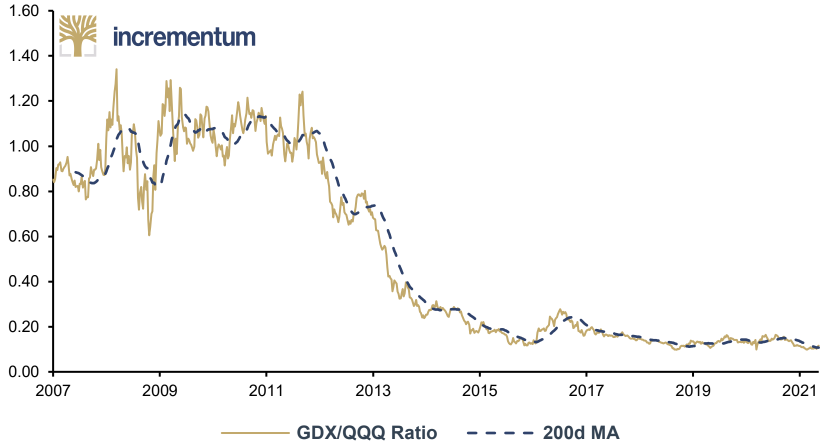


Source: Reuters Eikon, Incrementum AG

Every move you make
Every vow you break
Every smile you fake
Every claim you stake
I'll be watching you.
The Police, *"Every Breath You Take"*

Interest in the mining sector picked up noticeably last year, probably also due to Warren Buffett's investment in Barrick Gold, but since then has leveled off again. However, looking at relative strength, it seems that a sector rotation is currently proceeding, slowly but surely. If we have a look at the relative strength of mining stocks (GDX) versus the leading sector in the stock market — technology stocks (QQQ) — we see that miners have gradually increased relative strength. This illustrates that the value proposition of the mining sector is recognized, and that the relative strength of the sector has improved recently.

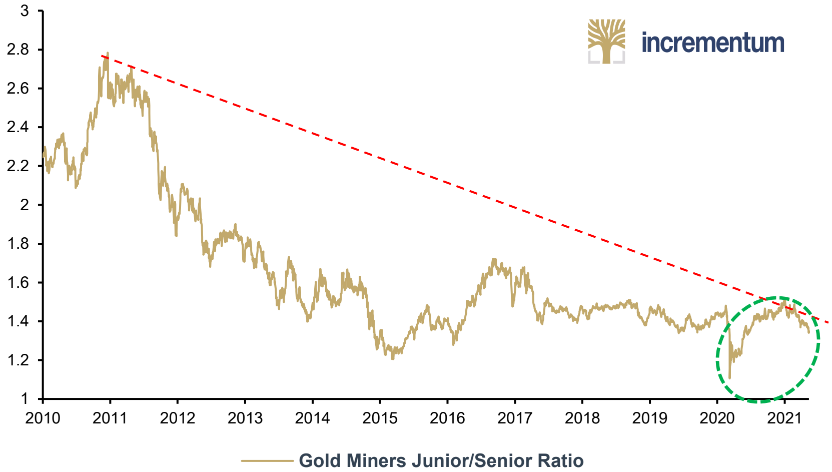
GDX/QQQ Ratio, 01/2007-05/2021



Source: Reuters Eikon, Incrementum AG

Moreover, if we examine relative strength within the mining sector, it seems that risk appetite is slowly coming back, with juniors (GDXJ) slightly outperforming seniors (GDX) since 2020.

Gold Miners Junior/Senior Ratio, 01/2010-05/2021



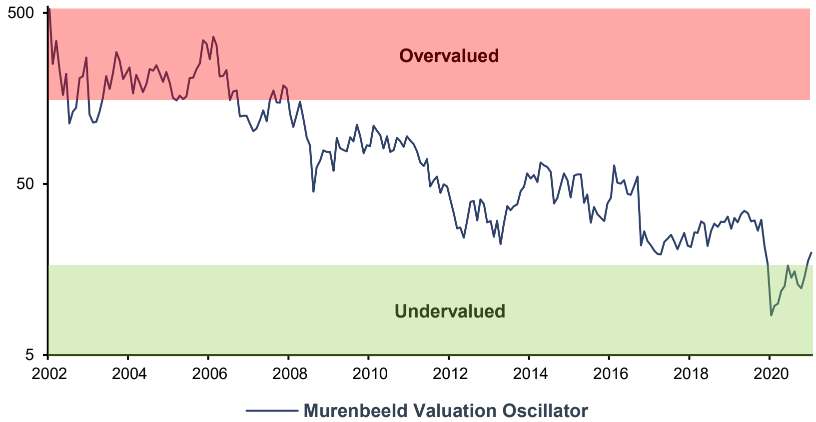
Source: Crescat Capital, Tavi Costa, Reuters Eikon, Incrementum AG

Valuations in the Mining Sector

> *"Whether we're talking about socks or stocks, I like buying quality merchandise when it is marked down."*
>
> Warren Buffett

The above-quoted "Sage of Omaha" made headlines last year, as Berkshire Hathaway made a surprising USD 500mn investment in Canadian gold miner Barrick Gold. This was somewhat surprising, as Buffett had never tired of "trash-talking" the yellow metal.[437] However, this love affair would not last long. Berkshire's 13F report showed that he liquidated his position in Barrick in the fourth quarter. Still, it is remarkable that the famed value investor seems to have found value on the balance sheet of a mining company. **From a valuation perspective, the gold mining industry has never been better regarding what you get versus what you pay.**[438]

S&P/TSX Global Gold Index - Capitalight Research Valuation Oscillator, 03/2002-03/2021

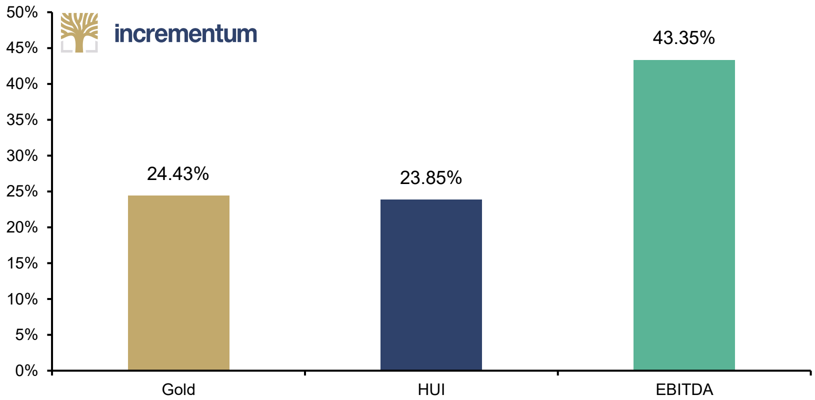


Source: Bloomberg, CapitalightResearch.com, Incrementum AG

Nobody can catch all the fluctuations. In a bull market, your game is to buy and hold until you believe that the bull market is near its end.
Jesse Livermore

In a typical bull market, **for every 1.0% increase in the gold price, the gold miners should appreciate 2-3% due to the leverage involved.** For example, if the gold price is USD 1,000/oz. and all-in costs are USD 950/oz., the net margin is USD 50/oz. If the gold price increases 10% to USD 1,100/oz., all-in costs are the same; the 10% increase in the gold price leads to a 20% increase in margins, from USD 50/oz. to USD 60/oz. While this is an extreme example, the same principle of margin expansion applies to smaller price increases as well. The opposite happened in 2020, with mining stocks underperforming the gold price.

Gold, HUI, and EBITDA, Return 2020



Source: Reuters Eikon, Incrementum AG

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437 Warren Buffett's aversion to gold may also be explained by a desire to rebel against his father, Howard Buffett. Buffett Sr. was a liberal senator (in the sense of a classical liberal) who spent every living day campaigning for a return to the gold standard. *See* "What explains Warren Buffets 'aurophobia'?", *In Gold We Trust* report 2012

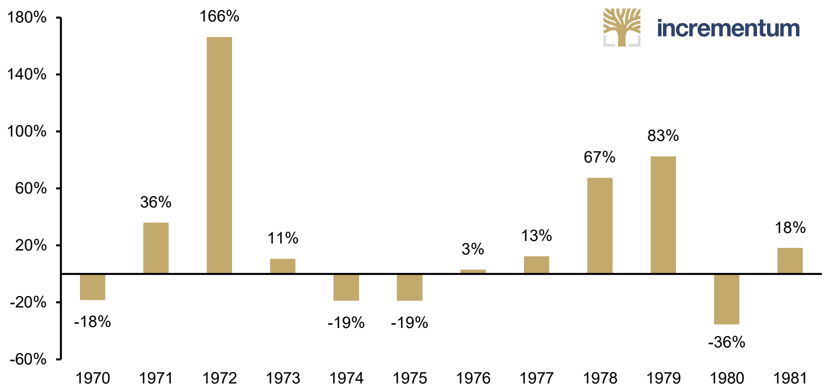
438 This great chart was provided by our friends at Capitalight Research Inc. Readers of the *In Gold We Trust* report can subscribe for an exclusive free trial under the following link: Incrementum I Capitalight Research

However, the substantial increase in profitability is not reflected in current market valuations. This disconnect is seen in every valuation metric, including price-to-net asset value (P/NAV) and enterprise or price-to-operating cash flow (EV/CF or P/CF). This is further supported by quality junior, mid-tier, and senior gold producers having FCF yields as high as 12-16%+.

I love it when people always say I´m always 'too early'. You can be late to a bull market – it's an escalator on the way up. You can't be late to a bear market – because it's an elevator going straight down.
Dave Rosenberg

Valuation in the gold sector would make sense if the increase in precious metal prices were transitory and unsustainable. However, we do not believe this is the case. The macroeconomic backdrop supporting precious metal prices has never been more robust, and it should only be a matter of time until new all-time highs are achieved and surpassed. The last major bull market for precious metals in the Western world was back during the 1970s, though it was confined primarily to the U.S. Metals and mining stocks alike soared, as measured by the Barron's Gold Mining Index (BGMI), making investors small fortunes.

BGMI Performance, in %, 1970-1981



Source: Nick Laird, goldchartsrus.com, Incrementum AG

I believe in yesterday.
The Beatles, *"Yesterday"*

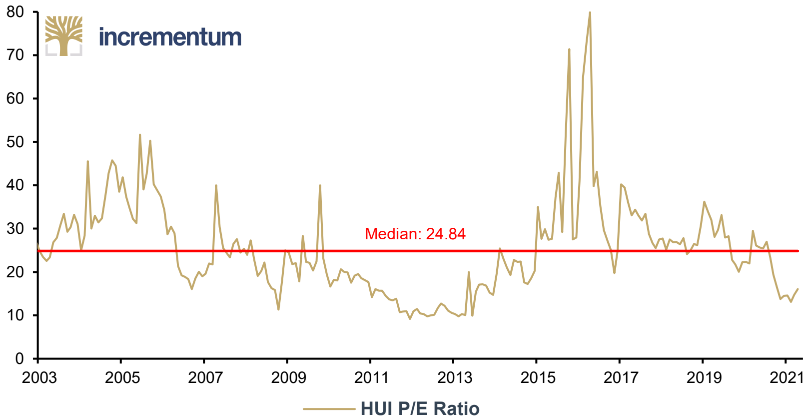
While it is challenging, if not impossible, to construct a diagram of companies trading at various P/NAV multiples or in the aggregate/indices, we will take a look at one index. It is worth mentioning some select premier companies and their NAV multiples, using a long-term gold price deck of USD 1,725/oz. and a 6.0% discount rate. We calculated the following average P/NAV multiples for each group:

- **Senior producers:** 1.04x NAV; group consisting of Agnico-Eagle Mines, Yamana Gold, Barrick Gold, Anglo-Gold Ashanti, Kirkland Lake Gold, Endeavour Mining, B2Gold, and Kinross Gold.
- **Mid-tier producers:** 0.66x NAV; group consisting of Equinox Gold, Eldorado Gold, Centerra Gold, Pretium, Torex Gold, and SSR Mining.
- **Junior producers:** 0.54x NAV; group consisting of Resolute Mining, Victoria Gold, Gran Colombia, Argonaut Gold, Calibre, and Roxgold.

Moreover, there are countless quality development-stage companies with NAV multiples ranging from 0.25x up through 0.50x.

Prevailing valuations would be more palatable if not for the increasingly outrageous valuations of mainstream equities. The average company in the S&P 500 is trading with a trailing 12-month price-to-earnings ratio (P/E) of over 30x. On the other hand, the following charts clearly show that companies included in the HUI Gold Bugs Index[439] are trading at the lowest P/CF and P/E multiples in more than 20 years.

HUI P/E Ratio, 01/2003-04/2021

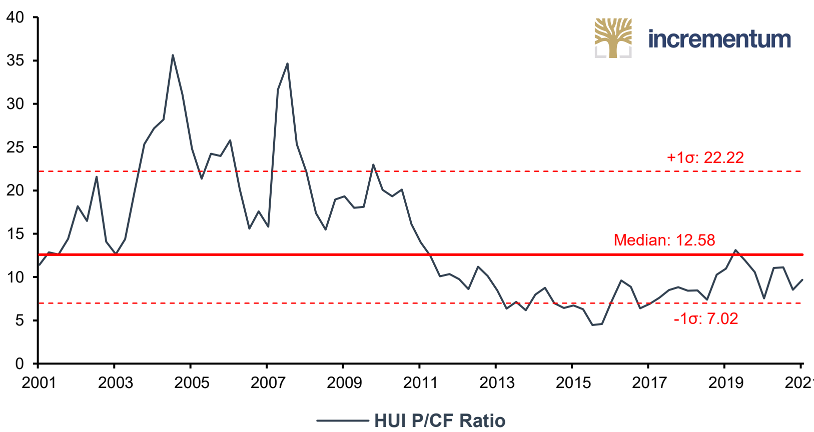


Source: Reuters Eikon, Incrementum AG

History teaches that when valuations are extreme, "mean reversion", a move towards historical norms, is likely. Once value stocks turn, the recovery can be fast and intense.
Rob Arnott

The next chart depicts the P/CF multiple of the HUI from Q4/2001 through the end of Q1/2021. The red line is the mean over this period, which is 12.58x. The dotted lines are one standard deviation above and below the mean. As of the end of Q1/2021, the index was toward the bottom end of the range, suggesting gross undervaluation. **In the first quarter of 2021, the spot gold price averaged USD 1,799, while various estimates suggest industry AISC nudged below USD 1,000. This means that despite a consolidating gold price, the industry-average cash margin per ounce in Q1/2021 was still increasing to over USD 800.**

HUI P/CF Ratio, Q1/2001-Q1/2021



Source:Reuters Eikon, Incrementum AG

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439 Companies in the HUI include Newmont, Barrick Gold, Wheaton Precious, Agnico Eagle Mines, Kirkland Lake Gold, AngloGold Ashanti, Kinross, Gold Fields, B2 Gold, Yamana Gold, SSR Mining, Alamos Gold, Novagold, Compania de Minas Buenaventura, Harmony Gold, Coeur Mining, Equinox Gold, Eldorado Gold, Pretium Resources, and IAMGOLD.

We have already looked at various valuation metrics. It is also worth looking at the gold price divided by the mining stocks price (HUI). During bull markets, gold stocks tend to trade with a premium, as was illustrated in the last bull market (2001–2011/12). The HUI/gold ratio indicates that gold stocks are trading one standard deviation below the mean, thus gold stocks are currently one standard deviation cheaper relative to the historical mean.

HUI/Gold Ratio, 01/1997-05/2021

Source: Reuters Eikon, Incrementum AG

Conclusion

A speculator is a man who observes the future, and acts before it occurs.
Bernard Baruch

No matter how one looks at it, using every valuation tool in the toolbox as well as some basic statistics, it is difficult, if not impossible, to argue that gold stocks are not inexpensive.

Our dear friend John Hathaway at Sprott recently mentioned another stunning example of the undervaluation of gold mining stocks, which currently trade at a 50% discount to the S&P 500 Total Return Composite Index. **Gold miners trade at an EV/EBITDA of 7.81, compared to the equal-weighted S&P 500 level of 16.76. This is the widest spread in 10 years.**[440]

While the valuation discrepancy has been ongoing for a while now and has been frustrating for most precious metal investors, the metals and mining stocks will have their day in the sun; it is a question of when, not if.

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440 *See* Hathaway, John: "One of the Greatest Bubbles in History", Sprott Gold Report, January 22, 2021

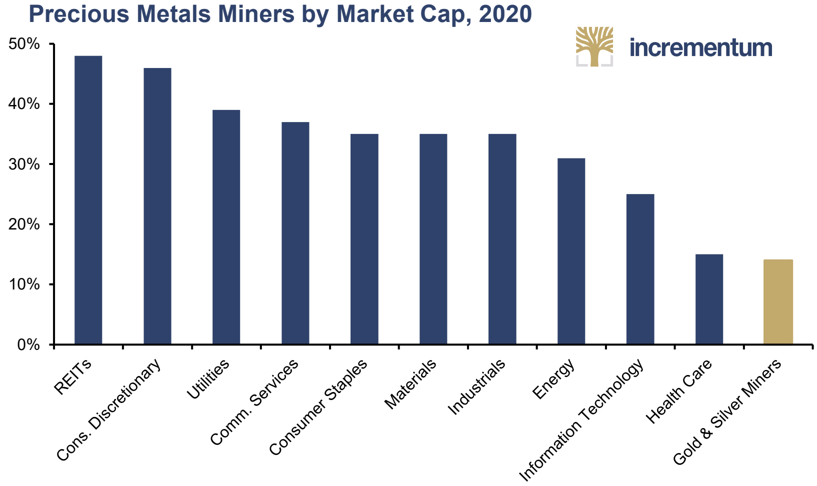
A Deep Dive into the (Under)valuation of the Mining Sector

"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

As mentioned in the previous sector, on the back of higher gold prices, the value proposition of the mining sector has started to shine. Not only on an absolute level, but also relative to other sectors, as the following chart of total debt to assets shows.

Median Total Debt to Asset Ratio, Russell 3000 Index and Top 50 Precious Metals Miners by Market Cap, 2020



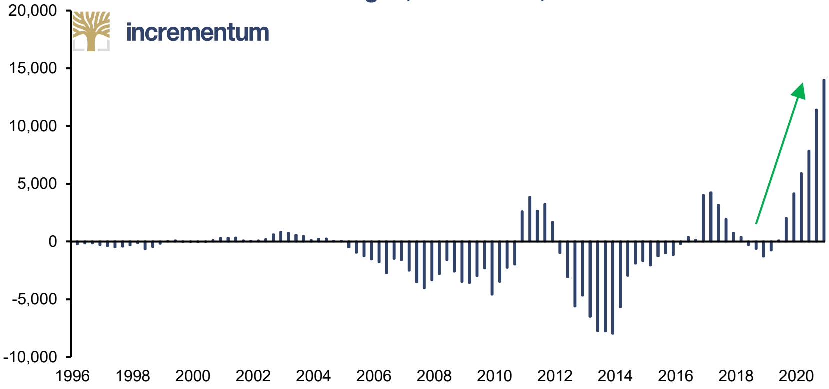
Source: Bloomberg, Crescat Capital, Tavi Costa, Incrementum AG

This achievement also includes higher profitability, vastly improved balance sheets, and excess cash generation. Leverage ratios have been greatly enhanced, with companies now returning material amounts of capital to shareholders through a combination of share buybacks and dividends. Currently, due to bargain valuations, stock buybacks are considerably more accretive than dividends. Once this is corrected, it is reasonable to expect that most companies will focus on raising dividends.

We cut back on expenses to yield a better balance sheet next year. We avoid ice cream today for a better body next year.
Chip Heath

The financial position of gold producers has improved dramatically, especially following the breakout from the USD 1,350/oz. resistance level in mid-2019, as cash flow and, more notably, free cash flow is now being generated. Before the breakout, only those producers located in the bottom quartile of the industry cost curve were generating free cash flow.

TTM Free Cash Flow of Top 50 Miners by Market Cap in the Canadian & US Stock Exchanges, in USD mn, Q1/1996-Q4/2020

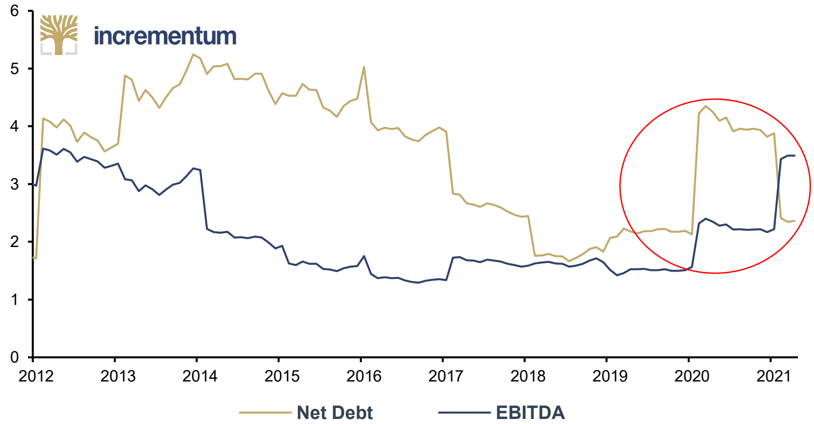


Source: Crescat Capital, Tavi Costa, Incrementum AG

Gold companies improved on leverage ratios in 2020. With an expected increase in performance, leverage ratios are expected to further decrease significantly, providing a much healthier balance sheet in the near future. Leverage ratios for the gold industry are expected to be significantly better than most other mining industries.
McKinsey

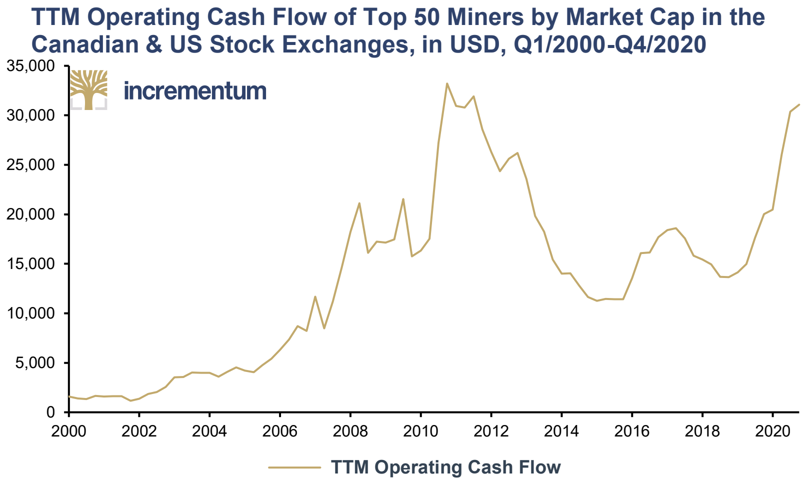
Net debt positions started to fall as the current bull market began in 2016, as illustrated by the net debt position of the HUI Index. The big spike corresponds to the outbreak of the Covid-19 pandemic. Many companies drew down cash from their revolvers due to uncertainty in the marketplace. Companies wanted to insure against liquidity issues, as numerous mining operations faced mandated government shutdowns. Net debt has since come down, and it is likely to continue to fall. However, companies are likely to remain conservative, paying down their revolvers in full, as there remains a degree of uncertainty around the Covid-19 pandemic, despite the advent of several vaccines. At the same time, debt financing is attractive in the current environment, as the cost of debt is far cheaper than the cost of equity, so net debt could fall more slowly than it would otherwise, at least until the cost of equity falls.

HUI Nebt Debt and EBITDA, in USD bn, 01/2012-04/2021



Source: Reuters Eikon, Incrementum AG

True profitability, especially for gold companies, is not reflected in net income; instead, it is just a starting point. If the company in question is a high-growth company such as Equinox, SSR Mining, or the like, a more accurate representation of earnings is operating cash flow. For more mature companies, such as Barrick, Newmont, Agnico Eagle, or other producers with output >1m oz. p.a. or those that are not ultra-high-growth, profitability is measured by free cash flow. Free cash flow is the excess cash generated beyond reinvestment and expansionary capital investment needs.

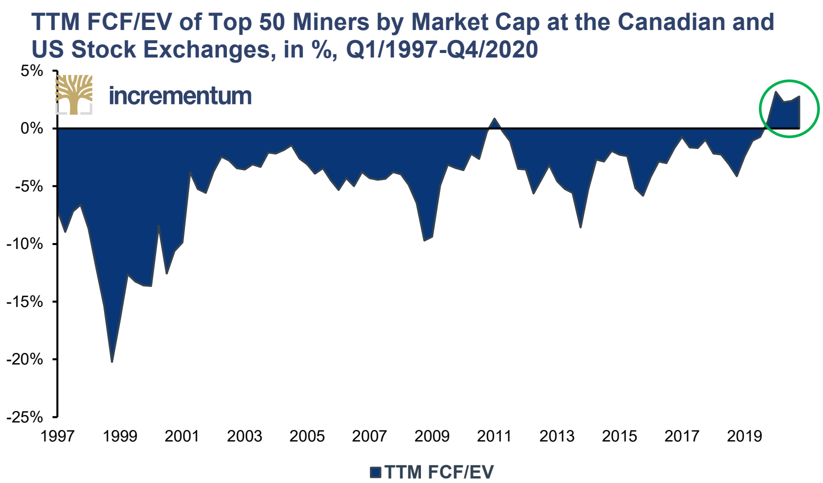


Source: Crescat Capital, Tavi Costa, Incrementum AG

The mining industry was not generating free cash flow from 2013–2015. Even after that, free cash flow was relatively marginal and confined to low-cost companies, with a reprieve for some companies beginning in 2016. Most of the industry – all but those in the highest-cost quartile – was free-cash-flow positive as a whole beginning in mid-2019. Once gold broke out of the key USD 1,350/oz. resistance level and reached USD 1,600/oz. and higher, the industry quickly became free-cash-flow positive, and low-cost producers became cash flow monsters. **Positive free cash flow generation also explains how companies have been able to deleverage.**

I guess what I'm trying to say is that if I can change, and you can change, everybody can change!
Rocky Balboa, *Rocky IV*

Furthermore, with regard to valuation, free cash flow yields are one metric we look at. They give us a rough idea of how cheap or expensive a company is, at least on the surface. We also examine some more involved valuation metrics. Free cash flow yield is defined as free cash flow/enterprise value (FCF/EV), with enterprise value defined as the current market price × the shares outstanding + net debt. Higher metal prices also lead to higher return on capital and equity.

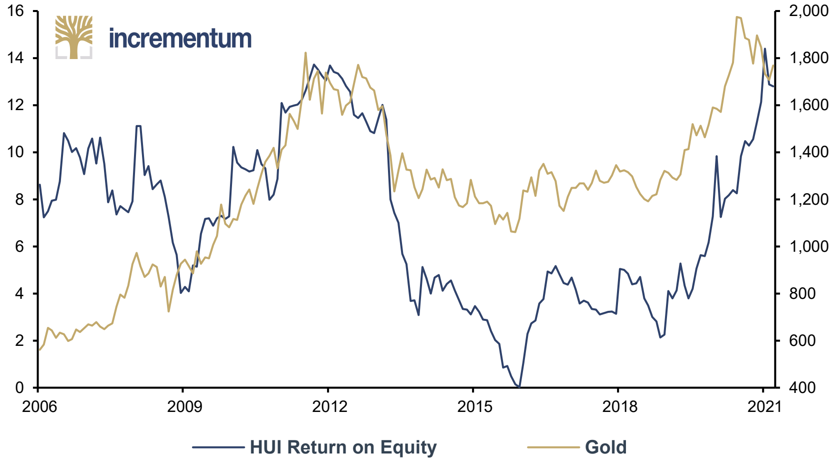


Source: Crescat Capital, Tavi Costa, Incrementum AG

Despite rising sustaining capital expenditure, most miners remain focused on cost discipline and cautious on capital expenditure. The emphasis of most companies remains on maximising value from their assets and increasing returns to shareholders.
Metals Focus

The return on equity (RoE) chart looks precisely how we would expect it to look. RoE peaked from 2011-1H 2012 but then fell and continued to fall as we entered a bear market from 2013-2015, with gold prices bottoming in 2H 2015. Bear turned to bull, but these are often lengthy processes; and while profitability improved, it fluctuated in a relatively tight range until mid-2019. After that, the gold price broke out, and profitability trended higher. Record RoE makes sense given the record AISC margins achieved in 2020.

HUI Return on Equity (lhs), in %, and Gold (rhs), in USD, 01/2006-03/2021

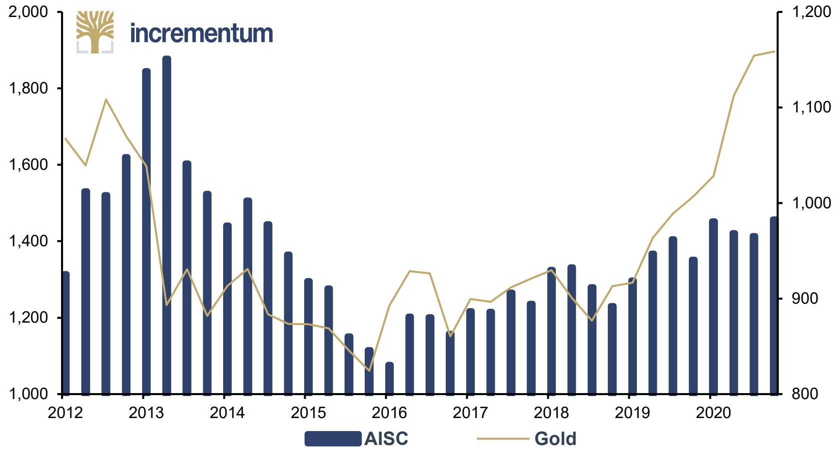


Source: Reuters Eikon, Incrementum AG

According to our friends at Metals Focus, average all-in sustaining cost (AISC) margins, defined as the gold price minus AISC, reached a record high of USD 828/oz in 2020, comfortably higher than the previous record set in 2011 of USD 666.[441] Silver miners achieved similar margin growth last year, although they did not reach record highs. AISC margins for the silver mining industry more than doubled year-on-year from USD 4.51/oz to USD 9.58/oz. Gold miners' costs rose in 2020. The average AISC in the gold mining sector increased by 1.8% yoy. This was a relatively modest increase given the disruption caused by the pandemic, which, according to Metals Focus, led to a 4.4% yoy decline in global mined gold output.

[441] *See* Christensen, Neils: "Gold miners generated historic profits in 2020, expect more of the same in 2021 - Metals Focus", Kitco, March 24, 2021

Gold (lhs), in USD, and AISC (rhs), Q1/2012-Q4/2020



Source: Metals Focus, Reuters Eikon, Incrementum AG

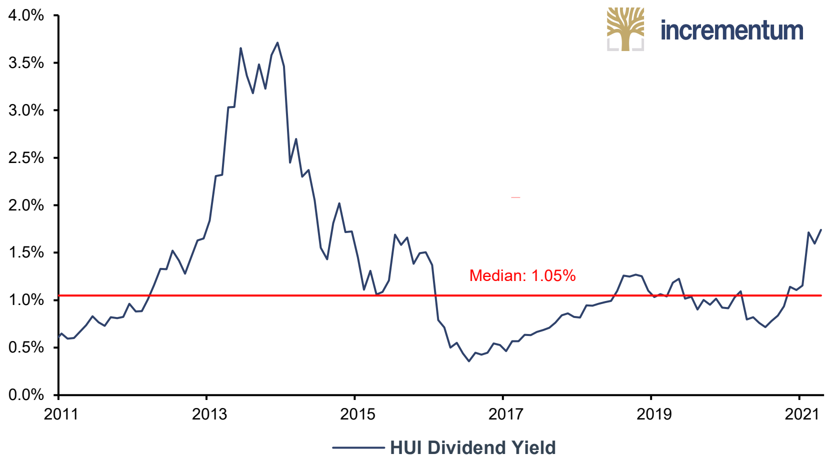
It has certainly been good to see companies that eliminated dividends six or seven years ago reinstating them now and certainly good to see, from an industry perspective, companies growing dividends.
Sean Boyd
CEO Agnico Eagle Mines

During the last bull market, high-quality companies generated solid free cash flow and, in turn, positive free cash flow yields. However, in the later years of the previous bull market, notably in 2010-2012, the average mining company (which is not high-quality) had exceedingly bloated G&A expenses, often paying management and everyone involved with the company far more than they deserved. Mining companies still generated free cash flow, but it was much lower on average than one would think, given the gold price. During the lean years (2013-2015), mining companies cut costs to the bone, which they should have been doing all along. In short, during much of the last bull market, the industry as a whole was free-cash-flow neutral. Luckily, at least to this point in the cycle, companies have been able to contain themselves.

The dividend streams from precious metals equities should attract a huge wall of yield-seeking money from the fixed-income market.
Thomas Kaplan

With gold mining companies generating significant cash flow, dividend payouts have increased. In the current environment, with depressed prices for gold stocks relative to cash flow generation, more companies will look to buy back their shares while the opportunity presents itself and hike dividends, though to a lesser degree than would otherwise be the case. This is something worth considering. For example, senior gold producer Kirkland Lake Gold returned USD 848.3m to shareholders during 2020. While this did include two dividend hikes, just USD 116m of that amount was returned via dividends, with the remaining USD 732m used for buying back 18.926m shares. While it was not the case for the industry as a whole, a fair number of companies chose to buy back shares while they were cheap, as doing so presented a better value proposition. **In other words, when gold stocks obtain reasonable and premium valuations in the market, buybacks are likely to fall considerably and be reallocated into higher dividend payments.**

HUI Dividend Yield, in %, 01/2011-04/2021



Source: Reuters Eikon, Incrementum AG

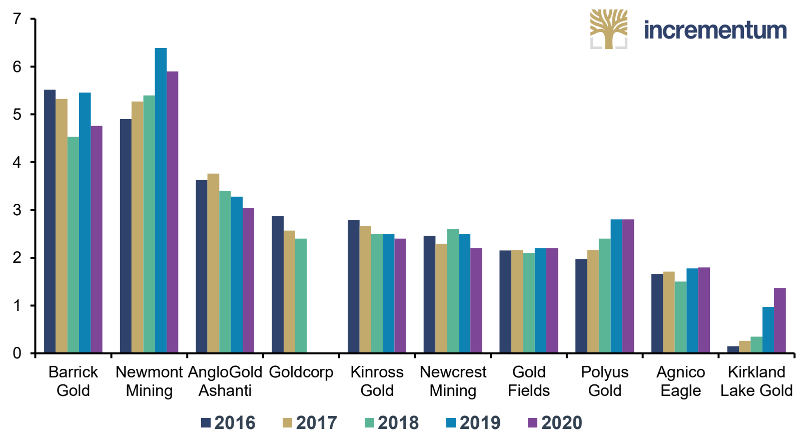
A New CAPEX Cycle Ahead?

> *"It's time to get back out in the field and start drilling!"*
>
> Richard Schodde

278 major gold deposits were discovered between 1990-2019. However, only 25 of these discoveries were made in the last decade and none between 2017 and 2019.
Adam Webb

In 2020, gold production hit a five-year low. Of course, the disruption due to the Covid-19 pandemic played a role; however, the drop represents a secular trend of declining gold production. **In the coming years, a price will have to be paid for neglecting exploration spending.** The steady deterioration in production profiles is likely to continue. It is estimated that seven of the ten largest producers have reported year-on-year declines in production in 2020. Moreover, compared to 2016, four out of ten majors have shown falling production.

Gold Production of Top 10 Miners, in Moz, 2016-2020

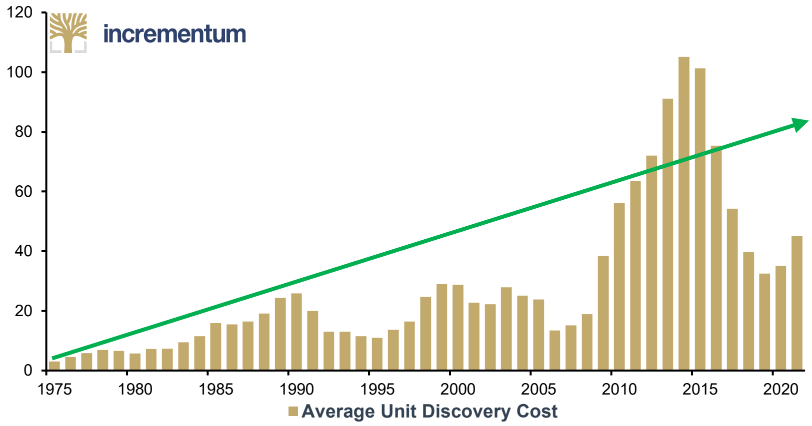


Source: Company Reports, IntelligenceMine, Seeking Alpha, Reuters Eikon, Incrementum AG

Does that mean that falling gold production is here to stay? What would that mean for gold prices? In our *In Gold We Trust* report 2018, we wrote extensively about "peak gold" and concluded that the fear-mongering is somewhat exaggerated.[442] **We primarily see the following trends:**

- An intermittent peak in gold production currently appears to be likely.
- Analogous to what happened in the oil sector, strong progress in innovation in the gold sector is urgently needed, particularly in making exploration more efficient. This technological paradigm shift is currently happening in mining.
- Spending on greenfield exploration should be increased substantially. Realistically this will only happen once a higher gold price is obtained.
- The cost of discoveries is set to rise in the long term. Richard Schodde of MinEx Consulting estimates an increase in discovery costs of USD 10/oz. per decade.

Average Unit Discovery Cost (3-year MA), in USD, 1975-2020



Source: Richard Schodde, Incrementum AG

However, we do not regard "peak gold" as a viable argument for higher gold prices, as the extremely high stock-to-flows ratio of gold ensures that production declines are compensated for by the large existing stock of gold. **Nevertheless, "peak gold" will affect the gold mining industry, because it should be expected that the pressure to pursue mergers and acquisitions will increase.**

The prospect of a serious reserve crisis is looming.
Mark Bristow
CEO, Barrick Gold

As the next chart shows, there has been a dearth of new large-scale assets that have come online over the last decade. Given the severity of the previous bull market, large-scale assets were not advanced to the degree they had been previously, as free cash flow margins were thin to nil prior to June 2019. More to the point is that the lack of exploration expenditures after the last bull market ended (2011/12) necessarily reduces future capital investment needs, and fewer projects have been built. **There is a lagging effect as the lack of exploration and drop in capital investment will likely cause future gold supply to fall.**

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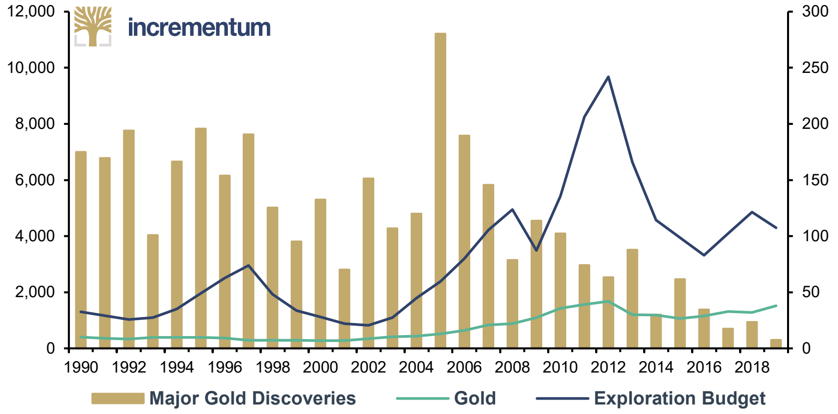
442 *See* "Precious Metals Shares – More Than a Silver Lining?", *In Gold We Trust* report 2018

Exploration Budget and Gold (lhs), in USD, and Major Gold Discoveries (rhs), in Moz, 1990-2019

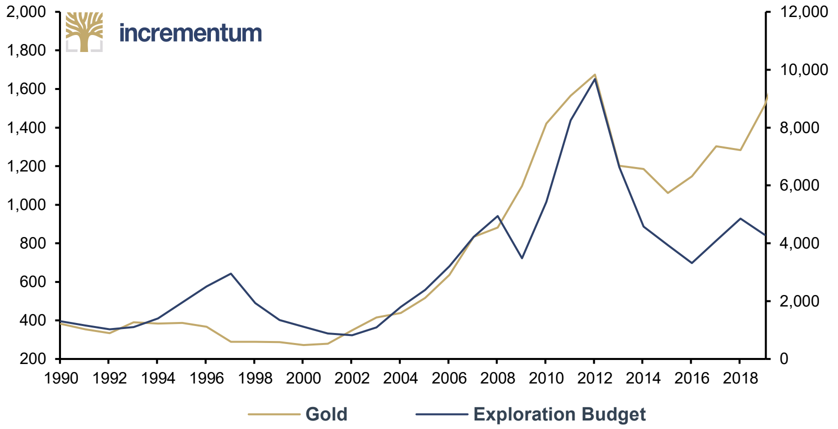


Source: Richard Schodde, Incrementum AG

You Mustn't Be Afraid to Dream a Little Bigger, Darling.
Eames, Inception

The significant decrease in exploration spending could be accounted for by senior producers doing less of their own drilling, outsourcing it to exploration vehicles, or waiting until a discovery is made and advanced through various studies (e.g., feasibility studies). Several new exploration companies have formed since 2019, and in 2020 one would be hard-pressed to find junior mining companies that did not raise adequate capital. Before and just after the gold price peaked in 2020, the cost of equity for junior exploration companies dropped markedly, allowing companies to raise more capital with less dilution.

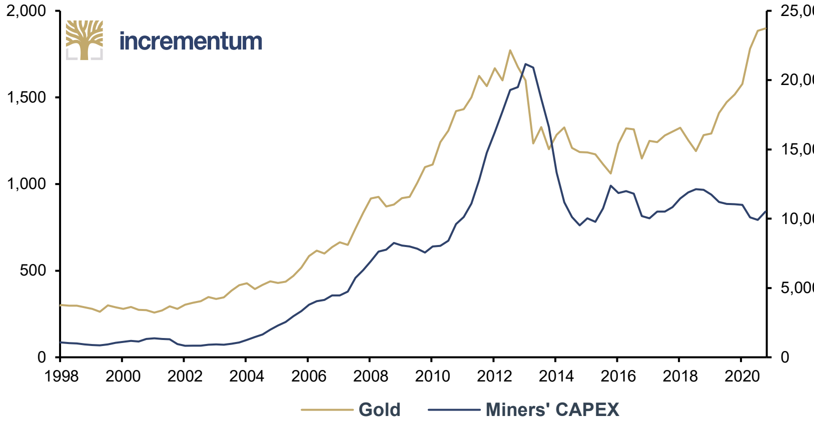
Gold (lhs), in USD, and Exploration Budget (rhs), in USD, 1990-2019



Source: Crescat Capital, Tavi Costa, Incrementum AG

The chart below depicts how capital investment has been trending lower. If gold prices hover around current prices or move higher, we will see growth in capital expenditures. Generally speaking, when a mining company decides to build a new mine, the project must have a minimum internal rate of return (IRR) of 18%-20%, using a relatively conservative gold price. Today that would mean a project that generates a minimum 18%-20% return at USD 1,500/oz. The developers of these mines are likely waiting until gold prices break higher to have a higher margin of safety. Some are likely waiting until they further deleverage their balance sheets or until the cost of equity comes down.

Gold (lhs), in USD, and Miners' CAPEX (rhs), in USD mn, Q1/1998-Q4/2020



Source: Crescat Capital, Tavi Costa, Reuters Eikon, Incrementum AG

Given the size of the resource that is available to be developed, talk of peak gold supply may seem a little surprising. Crucially, however, it is not the lack of gold that is the constraint. Gold miners and investors are carefully searching for the deposit that is "just right" in order to allocate capital.
Rory Townsend
Wood Mackenzie

The always insightful "World Exploration Trends", published by S&P Global Market Intelligence, highlighted the following developments regarding mining exploration activities:

- **The global exploration budget for nonferrous metals decreased only 11%,** to an estimated USD 8.7bn in 2020, from USD 9.8bn in 2019, when a larger decline was initially expected.
- **Junior and intermediate companies were quite successful in raising funds in 2020**, with USD 11.2bn raised in the year: the highest total since 2012. While the bulk of the year's funding was raised on the Toronto Stock Exchange (TSX), which accounted for USD 5.5bn, the Australian Stock Exchange (ASX) had a record-setting year at USD 4.3bn.
- **Only gold and silver posted year-over-year increases in exploration budgets in 2020**, while industrial metals declined, led by copper, zinc, lithium, and cobalt.
- **The shift away from grassroots exploration has been reflected in fewer initial resource announcements during recent years.** There were 52 initial resources recorded in 2020 – a five-year low and a far cry from the 10-year high of 175 new deposits in 2012, when grassroots exploration comprised around one-third of exploration budgets.
- **Policymakers have raised red flags over negative impacts to future production from the lack of grassroots exploration,** spurring governments to boost domestic exploration through incentive programs. Although these trends have not yet appeared to affect current production levels, explorers and producers could be forced to refocus on discoveries via grassroots projects over the coming years, as metals prices are forecast to rise while the project pipeline narrows.
- **Drilling activity seems to have recovered swiftly.** Exploration results dipped in the June quarter but recovered strongly for full-year totals of 41,026 drillholes at 1,098 projects, up 5.3%.
- **Gold continued to be the top exploration target in 2020**, with its share of holes drilled globally increasing to 78% from 69% in 2019. The number of projects drilling for gold increased 17% year over year to 757 from 645 in 2019. The number of holes drilled for gold also increased, by 19%, or 5,246 holes.

- **The gold drilling increase was mainly at late-stage and minesite projects.** The more developed a project, the more focused the drilling required to define a deposit, while early-stage projects require fewer holes, spread over larger areas, to identify targets. The drilling increase therefore reflects companies' ability to conduct focused drilling on late-stage and minesite targets during the pandemic instead of large-scale, early-stage regional programs. It also reflects miners' focus on advanced projects to take advantage of gold's rising price. The number of projects drilling for gold increased year over year to 340 from 299 for grassroots, to 279 from 227 for late-stage and feasibility, and to 138 from 119 for minesite work.[443]

I never cared what something costs; I care what it's worth.
Ari Emanuel

Miners are primarily looking to buy gold through M&A to secure their future production. So far this has failed to significantly increase production, as a study by Wood Mackenzie confirms. The authors estimate the industry will need to commission roughly 9mn oz (262t) of projects by 2025 to maintain 2019 production levels. This equates to roughly 44 projects. **Based on the average project capital intensity, Wood Mackenzie estimates the industry must invest approximately USD 37bn on greenfield projects and restarts over the next 5 years.**[444]

Conclusion

***"Real value is created through the drill bit"* is an old saying in mining.** Brownfield exploration and the expansion of existing deposits accounted for the majority of investments in recent years. **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.

M&A and Financing Trends in the World of Mining

> *"With high balance-sheet flexibility, M&A, capital structure, and payouts are likely to remain key discussion topics. Moreover, low exploration budgets over recent years, declining reserves of large gold companies, and high industry fragmentation may also cause a growing wave of M&A activity to make business sense."*
>
> McKinsey

In last year's *In Gold We Trust* report, we noted that one of the key themes in coming years would be M&A. Everything we discussed then regarding M&A in the chapter "Mining Stocks: The Party Has Begun" is worth rereading.[445]

Unlike a large number of deals completed from 2010-2013, in which massive premiums were offered, recent M&A activity continues to be

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[443] *See* "Report: World Exploration Trends 2021", S&P Global, March 2021
[444] *See* "$37 billion gold project spend needed by 2025", Mining.com, June 17, 2020
[445] *See* "Mining Stocks: The Party Has Begun", *In Gold We Trust* report 2020

far more reasonable, and this looks to be the trend going forward. Deals are likely to see much smaller premiums, with the possible exception of acquisitions of single-asset companies, which have an asset of scale with a low-cost structure or are located in Tier-I mining jurisdictions and exploration companies that are sitting on a sizeable deposit with strong economics. Unlike in 2010-2013, most recent deals make sense in terms of synergies and value creation.

You will not be relevant if you are less than something like $20 billion in market capitalization. You're not going to appeal to funds. You're not going to feature in the indices.
Neal Froneman, CEO, Sibanye Stillwater

According to a study conducted by S&P Global, the deal value of mining industry M&A in 2020 declined by almost one-third year over year. This was mostly due to disruption caused by the pandemic.[446] It included a 17-year low in the number of base metal deals. Another important factor was the lack of very large deals at the top of the industry, with resulting asset divestitures, as there were in the previous two years with the Barrick-Randgold and Newmont-Goldcorp mergers.

However, M&A activity bounced back in the second half of 2020, due in part to record gold prices. Strong gold prices should sustain M&A again in 2021, while the ongoing global economic recovery will likely support deal activity among industrial metals such as copper, nickel, and zinc.

Too many companies are looking for a Brad Pitt when in the right circumstances, they might be able to settle for a Bart Simpson.
Liam Twigger

We continue to believe that sector consolidation will continue, especially due to the high industry fragmentation in the gold sector. The top five gold producers contribute less than 20% of the world's gold production per year. In contrast, for most other metals, the top five producers make up between one-third and two-thirds of global production. Traditionally, the gold sector has remained fragmented because there are lower barriers to entry for the industry.[447]

Gold Acquisitions, 2011-2020

Year	No. of gold deals	Total price paid (USDmn)
2011	74	15,265
2012	92	12,606
2013	61	8,776
2014	44	8,482
2015	47	12,591
2016	44	5,011
2017	59	6,440
2018	46	11,723
2019	39	20,300
2020	50	12,924
Totals	**556**	**114,117**
2019-20 change (in %)	**28**	**-36%**
10-year averages	**56**	**11,412**

Data as of Jan. 18, 2021.
* USD 10mn minimum transaction value.
Includes completed and pending deals as of data compilation date in each following year.
Source: S&P Global Market Intelligence, Incrementum AG

The most important M&A activities were, among others, the acquisition of Saracen by Northern Star (USD 5bn), Teranga's acquisition by Endeavour Mining

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446 *See* Wright, Nick: "Mining M&A in 2020 — Deal activity bounces back in H2 after disrupted H1", S&P Global, February 17, 2020
447 *See* Callaway, Greg, Periwal, Siddharth and Ramsbottom, Oliver: "Gold industry M&A: Riding the new wave buoyed by lessons from the past", McKinsey & Company, February 26, 2021

(USD 1.9bn), the acquisition of Alacer Gold by SSR Mining (USD 1.8bn) and the purchase of Premier Gold by Equinox, as well as the merger between Equinox and Leagold. While there was some M&A activity toward the end of 2020 and some thus far in Q1/2021, e.g. Newmont buying GT Gold for USD 311mn and Fortuna Silver taking out Roxgold (USD 884mn), we expect M&A to remain somewhat depressed for the time being, due to Covid-19 protocols and travel restrictions, which make site visits still very challenging.

The industry is sorely lacking high-quality exploration projects or development projects. The consequence of that is, when somebody makes a good discovery, they can be taken at absolutely eye-popping multiples.
Rick Rule

Despite all the excitement about an acceleration in M&A, we believe that this strategy should not be pursued at all costs. As we know, the industry has a somewhat "mixed" history with M&A, as the gold industry recorded impairments of roughly USD 100bn over the past decade.[448] Therefore, management must not fail to remember the mistakes that were made during the last gold boom. In the last gold price upcycle, both capital expenditures and M&A spending increased significantly. Reserves were added at a notably higher price. However, as gold prices fell post-2012, companies had to scale back capital spending substantially. The industry struggled for years to improve return on invested capital (ROIC) and was able to do so only through a combination of operating-expenditure control, capital-expenditure rationalization, and improved gold prices post-2015.

Given the context of increasing M&A in a climate in which there are potential concerns about such activity, **McKinsey has identified five key lessons for gold companies to consider incorporating into their M&A strategies:**

- Exercise rigorous validation of premiums paid (if they are paid at all).
- Focus on robust ROIC while chasing aggressive growth.
- Adopt a clear M&A theme with defined synergies and optionalities.
- Structure beyond pure M&A.
- Communicate (and deliver) to capital markets.

Now let us have a close look into the financing activities in the junior mining space. Our friend Kai Hoffman has provided us with an introduction and interpretation of his proprietary Oreninc Index, which measures the financial health of the junior mining sector on a weekly basis.[449] The index tracks and logs up to 41 data points of every financing.

The Oreninc Index is composed of three factors:
1) Total dollars of financings opened per week
2) Percentage of broker participation, including bought deals
3) Total number of deals opened

These factors are individually weighted, with broker participation contributing 50% to the weekly score. Oreninc believes that if brokers are getting involved, fees can be earned. It also means that confidence in placing the shares with clients is high. Increased broker participation, including the underwriting of bought deals, generally symbolizes higher overall interest in the sector.

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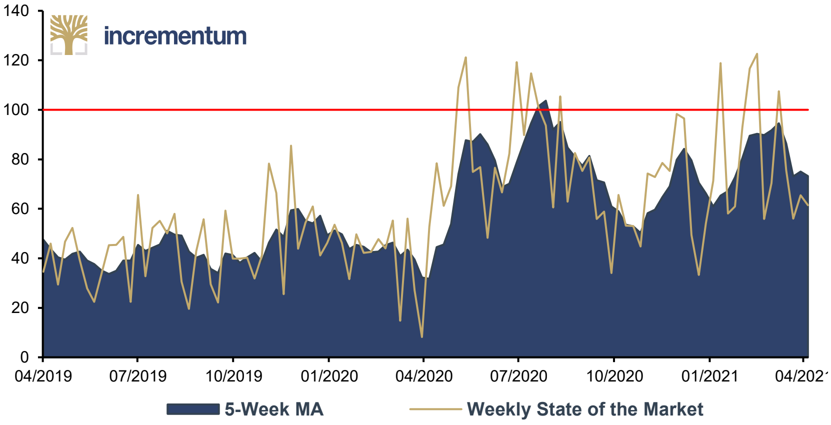
[448] *See* Callaway, Greg, Periwal, Siddharth and Ramsbottom, Oliver: "Gold industry M&A: Riding the new wave buoyed by lessons from the past", McKinsey & Company, February 26, 2021
[449] You can sign up for the weekly newsletter at http://www.oreninc.com/

Oreninc Canadian Resource Financing Index, 04/2019-04/2021



Source: Oreninc, Incrementum AG

Let us examine financing trends in 2021. The top 100 financings of 2021, as of April 9th, totaled CAD 1.85bn. The bulk of the funds were directed toward companies exploring or developing gold projects. While 52% of the companies were primarily gold-focused, they attracted over 58% of the total funding, or CAD 1.1bn. Base metal companies, focused primarily on copper and nickel, raked in a total of CAD 284.7mn. Battery metals, dominated by financings of lithium companies, managed to raise CAD 207mn. Silver companies came in only fourth, with a total of CAD 141.2mn.

The first four months in 2020 looked drastically different. The Oreninc Index fell to one of its lowest scores in history in mid-April. The top 100 financings for the first four months of 2020 raised a collective CAD 733mn. Unsurprisingly, the largest financings during that period were dominated by gold, with the precious metal accounting for CAD 482.6mn or 65% of the money raised during that period. The Oreninc Index, then, tells you the story for the rest of the year. Investments in the mining sector have skyrocketed, pushing the overall funds raised by junior mining companies to over CAD 5.5bn, the second-highest level since 2011.

You never give me your money / You only give me your funny paper.
And in the middle of negotiations
You break down.
The Beatles, "You Never Give Me Your Money"

In total US dollar terms, 2021 has already beaten 2013 and is soon going to surpass 2015, 2019, and also 2018. As laid out in the figures for 2021, the financing market is driven not just by gold or precious metals but also by base and battery metals. While the gold price has lost up to USD 250/oz. in the past six months, the copper price has shot up from USD 3.00 to USD 4.20 per pound during the same time frame. Another benefactor of the global transition to green energy is uranium. The price per pound of U308 has increased by 25% to USD 30.45 at present in the past 12 months.[450] The increased interest in the energy metal was directly followed up by investment demand, with uranium explorers and developers raking in CAD 119.6mn.

Taking a closer look at the list of gold financings in Q1/2021, it is obvious that money has been flowing to companies with later-stage projects that are higher up on the exploration value chain. The top spots are almost exclusively taken by

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450 *See* Uranium Resources Fund, Incrementum AG

producers such as Premier Gold Mines Limited (CAD 80.4mn) or developers such as Orezone Gold Corporation (CAD 73.8mn) or Osisko Mining (CAD 70.0mn).

Oreninc's observation that miners and developers are the driving force of gold financings is underpinned by the highest average offer size per financing on record. An average deal size of CAD 6.5mn per gold financing indicates that we are seeing fewer financings with the pure intention of keeping the lights on. Higher average deal size also means that the money raised is creating shareholder value. The average deal size per gold financing also beats the overall average deal size of CAD 5.6mn across the entire coverage universe.

Conclusion and Outlook

When investment flows into gold equities, it is like Niagara Falls running through a garden hose.
Peter Marrone
Executive Chairman,
Yamana Gold

The data tell us that the overall situation in the junior mining sector is not as grim as the market makes it out to be. Encouraged by higher commodity prices, investors opened their wallets and started financing projects across the board. Funds are still primarily flowing into gold exploration and development, but in recent months companies in the copper, lithium, and uranium spaces were able to attract investment dollars and to make up for weaker interest in precious metals. Financial stimulus and promises of infrastructure spending in the US have spurred interest in those commodities. Year-end total dollar numbers can reach or get close to 2011 levels of over CAD 8bn. **Looking ahead for the junior gold sector, it seems that mid-tier and major gold producers will be getting more active. For now, the focus will remain on projects in Tier 1 jurisdictions.**

Conclusion

"Reality leaves a lot to the imagination."
John Lennon

Always buy your straw hats in the winter.
Benjamin Graham

We expect gold companies to harvest record-high cash flows in 2021 and beyond. As can been seen from the following chart, the gold industry is in better shape than ever. The authors of a highly recommended study analyzed a sample of 85 gold companies that sell-side analysts were expecting to generate nearly USD 38bn in 2020 and USD 50bn in 2021.[451] This is significantly higher than the USD 25bn generated in 2019 and the USD 15bn to USD 20bn generated from 2013 to 2018. Even though companies are expected to improve organic investments, both greenfield and brownfield, free cash flows will leave significant cash balances at their disposal. Additionally, the industry's debt capacity has climbed considerably, as leverage ratios have decreased with improving financials. This will provide additional room to invest, if required. Some part of this cash will be distributed back to shareholders. However, given the high attractiveness of the gold industry, McKinsey expects companies to redeploy a significant part of their capital to secure growth.

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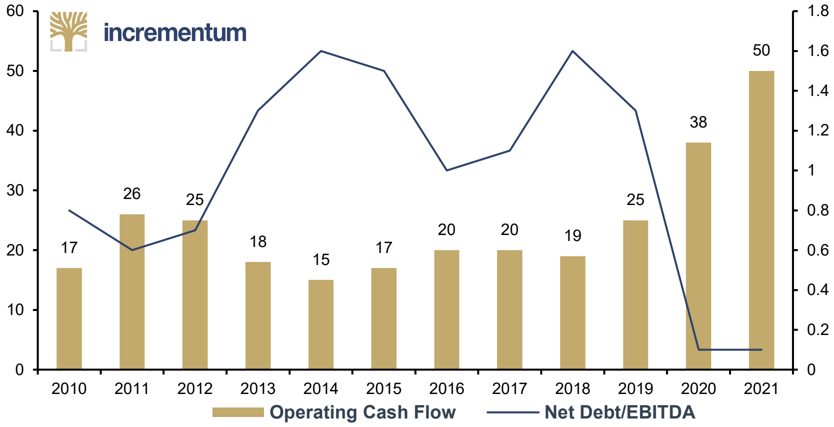
451 *See* Callaway, Greg, Periwal, Siddharth and Ramsbottom, Oliver: "Gold industry M&A: Riding the new wave buoyed by lessons from the past", McKinsey & Company, February 26, 2021

Operating Cash Flow (lhs), in USD bn, and Net Debt/EBITDA (rhs), 2010-2021E



Source: McKinsey, Incrementum AG

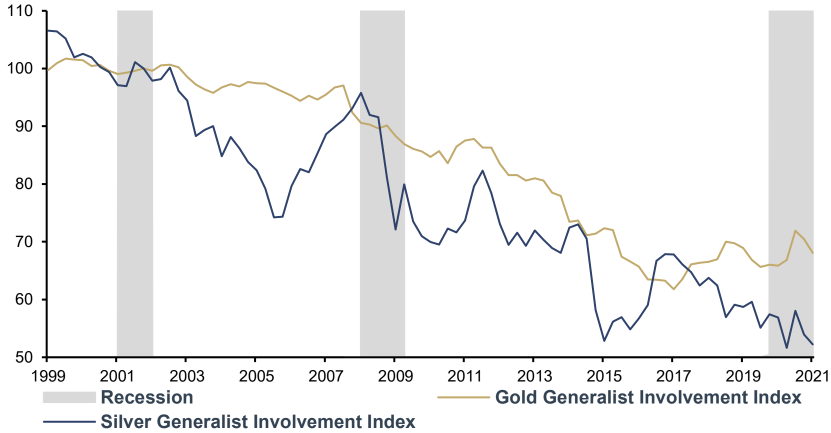
For your convenience, we have summarized the main reasons why we expect a bright future for the industry:

- FCF has been prioritized for (a) reinvestment in the business through exploration of capital spending and (b) returning cash to shareholders, mainly via dividends.
- Balance sheets are pristine, as those who are not already in a net-cash position should get there by early 2021.
- Most companies continue to use conservative pricing in the 1200 to 1300 USD range to calculate reserves and project economics, but we expect gold prices to rise considerably higher.
- The companies also expressed a convincing commitment to increasing ESG initiatives.[452]
- The sector is weathering the Covid-19 crisis well. Gold mine production was down only 4% in 2020.
- The gold mining industry is at its healthiest shape in decades, but valuations do not reflect it. Yet!

Last year, some major gold miners have broken out on high volume. Generalist investors in the gold space are slowly entering the sector again, while the silver sector still must be discovered by generalist investors.[453]

[452] *See* chapter "ESG and Your Portfolio – Building a More Sustainable Future" in this *In Gold We Trust* report.
[453] This great chart was provided by our friends at Capitalight Research Inc. Readers of the *In Gold We Trust* report can subscribe for an exclusive free trial under the following link: Incrementum I Capitalight Research

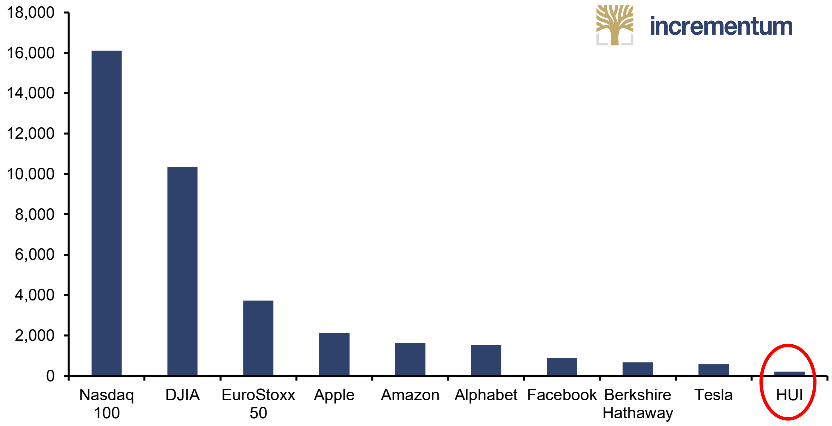
Capitalight Research Generalist Involvement Index, 12/2002 = 100, Q1/1999-Q1/2021



Source: Capitalight Research, Incrementum AG

A glance at the market capitalization of gold mining shares reveals a substantial discrepancy in valuations relative to other asset classes, which was not remotely evident in 2008. Currently the total market capitalization of the constituents of the HUI Index – which includes the 20 largest unhedged precious metals producers – amounts to a mere USD 209bn. This is equivalent to 0.56% of the total market capitalization of the constituents of the S&P 500 Index. **The valuation of Apple alone currently amounts to more than 10 times the total market cap of all HUI constituents.**

Market Capitalization of Major Indices, Global Players and Gold Shares, in USD bn, 05/2021

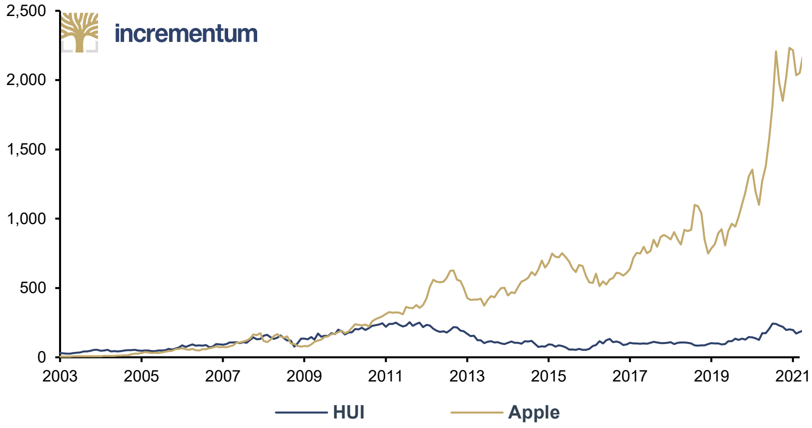


Source: Reuters Eikon (as of May 14 2021), Incrementum AG

Bull markets are more fun than bear markets.
Bob Farrell

Another interesting tidbit regarding gold mining stocks: With its current cash reserve of USD 195bn, Apple could in theory either buy almost the entire HUI or, alternatively, buy roughly 3,330 tons of gold. Continuing with this thought experiment, if the latter were to happen, Apple would become the world's second-largest gold holder after the US Treasury.

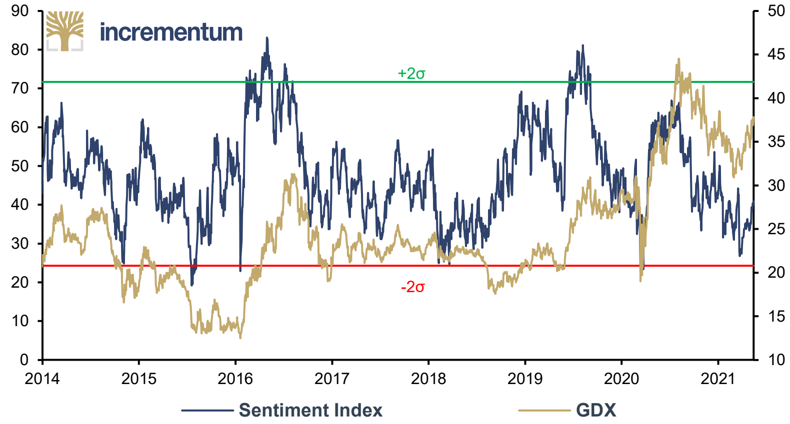
Market Capitalization of HUI and Apple, in USD bn, 01/2003-05/2021



Source: Reuters Eikon, Incrementum AG

A look at the Sprott Equity Sentiment Indicator confirms our bullish stance.[454] Sentiment reached a low in March, and the indicator plunged to two standard deviations below its mean. Since then, the Sprott index and the GDX index have recovered but are still far from the euphoric levels of August last year. **In this respect, the current foundation for further price increases seems superb.**

Sprott Gold Equity Sentiment Index (lhs), and GDX (rhs), 01/2014-05/2021



Source: Sprott Asset Management, Incrementum AG

Blackbird singing in the dead of night. Take these broken wings and learn to fly. All your life / You were only waiting for this moment to arise.
The Beatles, *"Blackbird"*

The potential rates of return over the next several years could surprise even the most ardent gold bugs. However, in advocating mining stocks, we are still reminded of "The Dancing Sasquatch Guy".[455] Right now, it seems that we are at minute 1 but as can be seen in the video, once a certain degree of awareness is reached, it can turn into a mass movement quickly.

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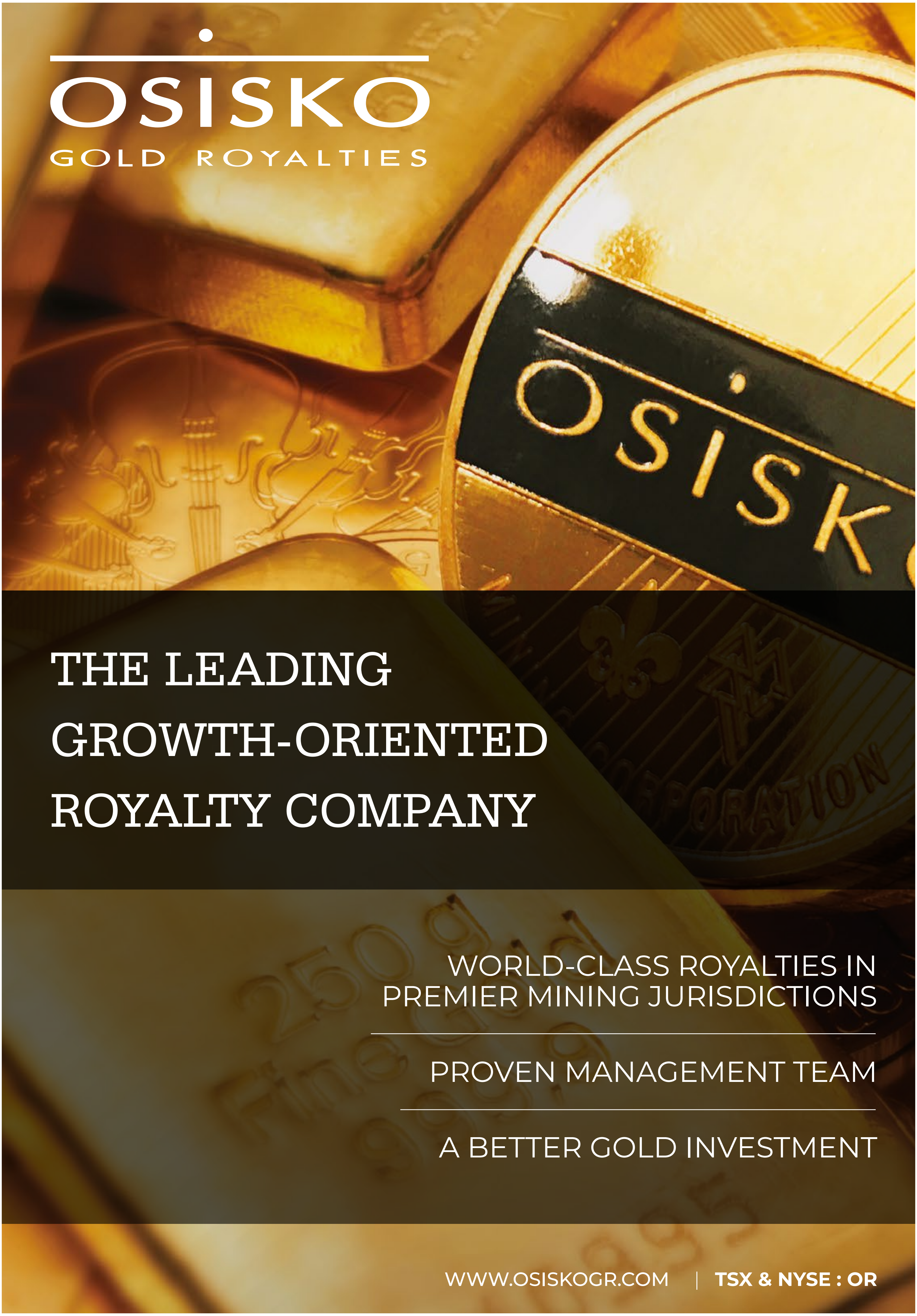
[454] The data was kindly provided to us by our premium partner Sprott Asset Management.
[455] Great interpretations of this video can be found here: "The Dancing Guy at Sasquatch!", Eight Leaves, or *also* "Ideas Into Execution: Giving Away An Idea To Make It Happen", Tech Dirt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ESG and Your Portfolio – Building a More Sustainable Future

“You wouldn’t invest in companies that didn’t report their core financial data. So, if you are a ‘values’-based investor you cannot very well invest in companies which don’t detail material information.”

Leon Saunders Calvert, Head of Sustainable Investing & Fund Ratings, Refinitiv

Key Takeaways

- Mining companies have embraced the ESG movement and are incorporating its values into their business models.
- There are over ten different ESG frameworks, principles, standards, and other guidelines to choose from.
- Water management and the protection of biodiversity have become top ESG priorities.
- Responsible Gold Mining Principles give investors confidence that companies are making consistent efforts on ESG.
- With 7.8% of total patents related to sustainability, the mining industry is not only an early ESG adopter but also an ESG R&D leader.
- Gold as a physical asset is one of the most carbon-neutral investments over its lifespan.

Introduction

> *"Please take me dancing tonight, I've been all on my own."*
>
> Sting

Mining companies have embraced the ESG movement and are incorporating these values at their core. Just like Sting, they want investors to take them dancing and give them the recognition they deserve. However, for investors the story is not that easy. When it comes to choosing your ESG investment strategy, you might feel lost early on. Mining investors looking to clear the ESG fog swiftly realize that just as out on the highway, shining more light on the road ahead can prove counterproductive. **How can one find their way through such a fog? There are over ten different ESG frameworks, principles, standards, and other guidelines to choose from.**

Environmental, Social, and Governance Frameworks in Gold Mining

Responsible Gold Mining Principles (RGMP)									
Frameworks integrated into the RGMPs as requirements		Frameworks integrated into the RGMPs as authoritative guidance		Other Reputable Mining Industry Frameworks		International Reporting Frameworks		Ranking Agency Indices	
Topic Area	International Framework or Standard	Topic Area	International Framework or Standard	Framework	Issuing Organisation	Framework	Issuing Organization	Indices	Owner
Revenue Transparency	Extractive Industry Transparency Initiative (EITI)	**Responsible Sourcing**	Responsible Gold Guidance	**ICMM Mining Principles**	International Council on Mining and Metals	**GRI Standard**	Global Reporting Initiative	**Responsible Mining Index**	Responsible Mining Initiative
Human Rights	UN Guiding Principles on Business and Human Rights (UNGP)	**Health and Safety Management**	ISO 45001	**IFC Performance Standards**	International Finance Corporation (part of the World Bank)	**SASB Standard**	Sustainability Accounting Standards Board	**Dow Jones Sustainability Index (DJSI)**	S+P Global (acquired the ESG Ratings + DJSI from Robeco/SAM in 2019)
Security and Human Rights	Voluntary Principles on Security and Human Rights (VPs)	**Labor Rights**	ILO Fundamental Conventions	**Towards Sustainable Mining (TSM)**	Mining Association of Canada (MAC)	**UN Sustainable Development Goals (SDGs)**	United Nations	**MSCI ESG Ratings**	MSCI
Conflict Management	Conflict-free Gold Standard (CFGS)	**Environmental Management**	ISO 14001	**IRMA Standard**	Initiative for Responsible Mining Assurance	**DNK**	Deutscher Nachhaltigkeits-kodex	**Sustainalytics**	Morningstar (announced in April 2020)
Cyanide Management	International Cyanide Management Code (ICMC)*	**Mercury Management**	Minamata Convention	**RJC Code of Practices Standard (Jewellery)**	Responsible Jewellery Council			**FTSE4Good Index Series**	FTSE Russell
		Climate Change	Task Force on Climate- related Financial Disclosures (TCFD)	**Risk Readiness Assessment (RRA)**	Responsible Minerals Initiative (RMI)			**Refinitiv ESG**	Blackstone Group (55%), Thomson Reuters (45%)

Source: Incomet Capital

The table portrays the ESG norms currently in place that apply to the gold and general mining industry. They range from the UN Guiding Principles on Business and Human Rights, to the Conflict-Free Gold Standard and the Framework of the TCFD, which covers a few ISO norms, and also include the ICMM Mining Principles, the GRI Standards, and the UN Sustainable Development goals, amongst others.

With this excessive number of guidelines, principles, and frameworks, it is difficult for investors to assess the true ESG compliance of a mining company. Investors cannot precisely evaluate the details of all these frameworks and local legislation, as such evaluation could take months for just one company.

This leads to a major problem: Investors, banks, advisors – in short, the entire financial system – must now comply with ESG investment regulations in Europe, and soon in America, as the ESG regulation wave keeps moving on.

Understanding this new reality, rating agencies have risen to the challenge, as they have in the past,[456] and now provide investors with ESG ratings for thousands of publicly traded companies.

Thus, thanks to the rating agencies, building an ESG-compliant portfolio has never been easier. **However, a lot of discrepancies exist among the rating agencies' assessments leading to their ESG ratings.** This uncertainty can prove detrimental to any ESG portfolio investment strategy.

Portfolio Strategy: From Best in Class to Avoidance Screening

> *"When I think about ESG for any given portfolio investment, it starts with what will be most financially material for any prospective investment."*
>
> Lila M. Murphy, Intrinsic Value Partners

Technically, building an ESG-compliant gold mining portfolio requires only a few steps: Define the ESG characteristics of the portfolio, choose an ESG data provider, implement an investment strategy, and then engage with your investment.

ESG … looks set to dominate investors' agendas in the years ahead.
Credit Suisse

The choices involved in every step can have a major impact on the complexity and efficiency of the ESG portfolio's performance. Without providing a how-to guide, we aim to point out the main ESG portfolio strategy used in the markets today and offer some additional relevant information that could help you to see more clearly.

Define which issues regarding ESG are important for your portfolio

Mining must be or must become a sustainable activity, always taking care of every aspect, the economic and human aspects and nature.
Tatiana Clouthier

From water discharge to gender equality on the executive board, ESG ratings are based on more than 1,300 data points, leaving infinite possibilities for building a portfolio that goes hand in hand with the clients' chosen values.[457] Defining ESG parameters becomes the center point of the strategy. It is also important to keep in mind that ESG issues are not static. As shown in the next chart, the main concerns in 2008 were environmental policy and environmental management, as well as emissions. Even if emissions are still a top criterion, water management and the protection of biodiversity have now become the new top priorities.

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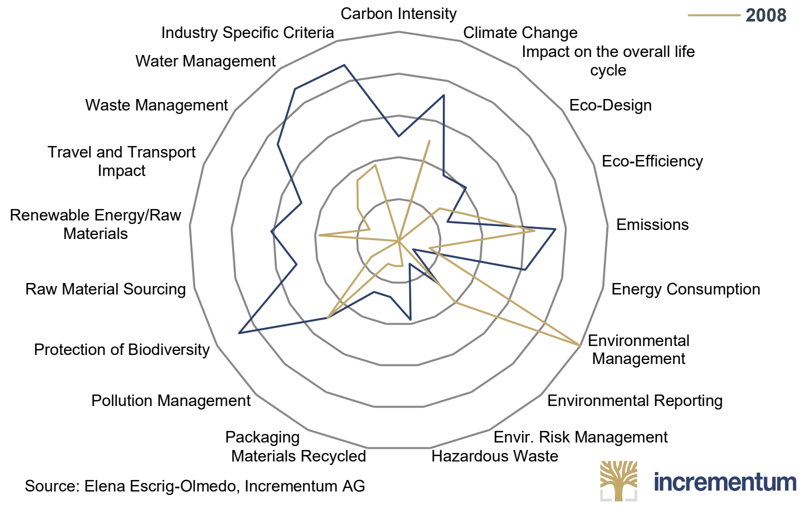
456 *See:* "Rating agencies part of banking crisis: investors", Reuters, September 25, 2008
457 *See:* Sustainalytics: ESG Risk Ratings

Evolution of ESG main issues between 2008 and 2018



Source: Elena Escrig-Olmedo, Incrementum AG

Choose Your ESG Data Providers

The world has changed, and gold mining has changed along with it. Today, buying gold or gold equities is not only a good investment from an ESG perspective, but given its work in remote, poor an otherwise neglected areas of the world, it can also be one of the best impact investments you can make.
Peter Sinclair
Advisor, World Gold Council

Without reliable data, the task of analyzing the ESG performance of a gold mining company is almost impossible to achieve by yourself. The company might publish a nonfinancial report (which is a good starting point), but such reports are often produced in order to make the company stand out positively. Financial reports can be compared from one company to the other, but this is not (yet) the case for ESG reporting.

Using the services of an ESG rating agency is, therefore, highly recommended. It could even be wise to use and compare the scores of more than one rating agency, since the various organizations tend to have enormous discrepancies among their scoring processes. A weighted average of ratings from Sustainalitics, Refinitiv, ISS ESG, VigeoEiris, and MSCI could potentially provide the best insight.

Over 10 major rating agencies provide ESG scores. For your convenience we have selected a few that we consider to be the most appropriate for the gold mining industry and have dived into their pros and cons for investors.

Pros and cons of the most-used ESG rating agencies

Rating Agency	Pros	Cons
Sustainalytics	Most used, they evaluate companies based on their management of ESG, their disclosed elements and real-life performance. Ratings related to exposure to industry-specific material ESG risks. Considered transparent in their data.	Subscription based. Only the global ESG Risk Rating and ranking are publicly available.
MSCI	Broad cover. Built for investors. Easy to incorporate into company valuation. The full report to the ESG score is very complete.	Scoring can be mysterious, as the computation is not always clear.
DJSI	Widely available and particularly good for building ESG quantitative strategies	Their rankings are not widely used, mainly because of a lack of transparency and lack of access to the core ranking data.
Thomson Reuters ESG Scores	Great sector data.	Lack of context can make data difficult to use for investors who are not specialists of the sector.
ISS Ratings Governance score	Specialized in corporate governance risks based on board structure, shareholder rights, remuneration and audit. Best analyses of governance risks.	Restricted to governance-specific issues; ignores sustainability and environmental issues

Source: Rate the Raters 2020: Investor Survey and Interview Results, Incrementum AG

Choose Your ESG Implementation Strategy

In the highly competitive ESG portfolio management race to gain more assets under management, investments strategies evolve rapidly. Choosing the top ESG mining performers is no more the trend when building a client's portfolio. Upon specific request, fund managers can build personalized portfolios that exclude mining companies with the lowest ESG performance or build the entire strategy to focusing on only one or a few precise issues that are at the core of their client's values.

They [investors] don't want to take a lot of risk, and a big part of the risk assessment is the ESG side of things.
Sean Boyd
CEO, Agnico Eagle Mines

Incidentally, the most-used model by asset managers was to build a portfolio of gold mining companies to act as a benchmark. We applied an ESG overlay, as discussed in the *In Gold We Trust* report 2020,[458] (excluding the companies with the worst ESG performance and determining the portfolio objective by controlling the weighting composition. By readjusting the weighting monthly and fixing clear parameters, the ESG value of the portfolio can be increased significantly without sacrificing financial performance. **Additionally, these portfolios tend to produce slightly better returns than their benchmark.** As expected, this model has now greatly evolved and complexified, so that ESG is treated more and more as just another common financial parameter.

When deciding how to integrate ESG factors into investment decisions and processes, it is important to remember that these factors can be used in the same way as financial factors. The principles of responsible investment provide us with clear insight on the four different strategies currently used by fund managers:[459]

1. **Fundamental strategies** require the investors to adjust the company financials according to their ESG consequences. For example, if a company must treat more contaminated rejects, their operating costs increase.
2. **Quantitative strategies** are used by fund managers to build investment models that incorporate ESG factors into all the financial data, such as revenues, net profit, etc.
3. **Smart beta strategies** focus on the portfolio risk profile, with a focus on ESG. The ESG factors can be used to weigh the portfolio construction, resulting in a lower ESG risk exposure.
4. **Passive strategies** allow the fund manager to adjust a benchmark index composition by weighting the companies making up the index by their ESG scores.

Building Your Portfolio – Selecting Individual Companies

Many strategies can be deployed to choose individual companies. One investor could favor only gold companies that are implementing the Responsible Gold Mining Principles. This would ensure that the selected companies have a real commitment to sustainability and are specifically addressing gold mining ESG challenges.

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458 *See* "ESG Compliance and Financial Stability", *In Gold We Trust* report 2020
459 *See* Principles for Responsible Investment: *A Practical Guide To ESG Integration For Equity Investing*, 2016

Other investors could focus on general ESG scores as a selection criterion. No matter which strategy one selects, the same steps will be applied: initial screening, due diligence, investment decision, investment monitoring, execution of exit.

Engage with Your Investment!

Everybody complains about the weather, but nobody does anything about it.
Mark Twain

This step might be the most important in managing your portfolio: Engage with the companies you invested in. It has been proven that the agent of change is not divestment but engagement. By being vocal in asking companies to do more towards ESG, you become an agent of change. The more that shareholders prioritize ESG-favored decisions, the more the company will have to embrace them.

If the executive remuneration of a public company does not include an ESG performance vector, there is no incentive to lean in this direction. However, if active ESG investors pressure the execs to incorporate the mitigation of environmental and social damages into their remuneration, changes in the company's ESG policies will happen quickly.

ESG Ratings: What to Improve Next?

> *"It is not good enough to do what the law says. We need to be in the forefront of these social responsibility issues."*
>
> Anders Dahlvig, CEO of IKEA

The European Union Commission (EUC), the first adopters of ESG into their financial regulations, published a report on ESG rating issues in November 2020.[460] They identified that the main problem with ESG ratings has to do with the inner workings of the rating agencies. They concluded that addressing this fundamental problem is crucial for the future of ESG-compliant investment.

In the cases where you need to measure actual relationships with the workforce or the host communities ... rating agencies frequently lack a robust analytical framework. They just tick the boxes ... on whether there is this policy on site, or whether this is this statistic provided.
Vitali Nesis
CEO, Polymetal

The main recommendations focus on nine pressing issues that currently reduce the reliability, quality, and relevance of using ESG ratings, which remain the only point of reference for fund managers and investors in regards of their regulatory ESG obligations.

The European Commission is focusing its attention on the data used to make the ratings**.** They are demanding greater transparency, accuracy, and reliability as well as more time-sensitive data. Additionally, the agencies be careful of data bias and only use data that is highly correlated with its material impacts. They should clearly divulge their possible conflicts of interest.[461] Moreover, they must provide better materiality and contextual understanding of their ratings. They will have to clarify which information comes directly from mining company sustainability disclosures and which from their engagement with companies, and use clear and consistent terminology that allows verification and the reproduction of results.

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[460] *See* European Commission: *Study on Sustainability Related Ratings, Data and Research*, November 2020
[461] *See* Krall, Markus: "Governance and Conflicts of Interest in Financial Credit Rating Agencies", *Revue internationale de droit économique*, Vol. 2, 2016, pp. 185-195

Is There a Way Around?

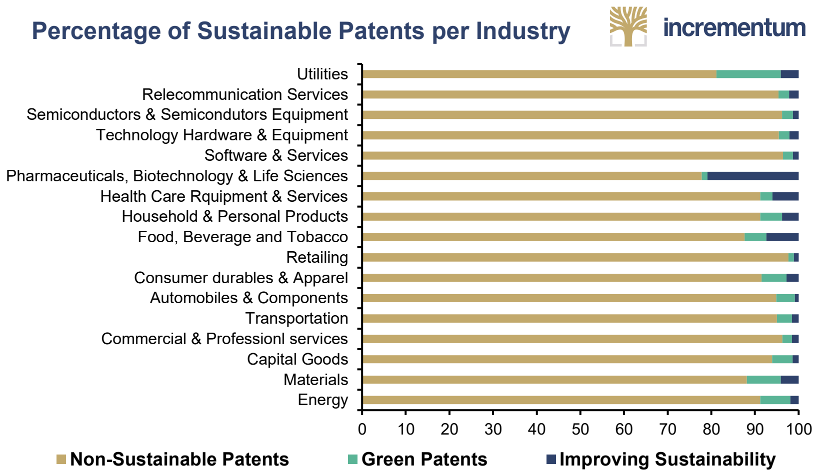
"There will be no one price for copper. There will be no more one price for gold. Everything will be priced in relation to its ESG components..."
Robert Friedland

For gold mining investors interested in following ESG principles, one way to get around these problems is to look for companies that have adopted the Responsible Gold Mining Principles. They give investors the confidence they need that companies are making consistent efforts and are deploying money into their ESG management. Furthermore, you should look at companies that not only report on all the aspects covered by the RGMP, but that are also assessed by an independent firm.

As joining the RGMP is done on a voluntary basis but engages a lot of capital, both financial and human, it sends a strong message to investors that ESG is a priority. Additionally, as the reporting follows strict guidelines, it allows comparisons among companies. Therefore, there is a higher chance that the scores obtained through RGMP will contain fewer discrepancies than those obtained by companies working with different rating agencies.

To improve is to change; to be perfect is to change often.
Winston Churchill

Another way to understand the mining industry's commitment to ESG values is by the impressive proportion of green-patent holders per sector in proportion to their respective total patents, as per the following graphic, where gold represents non-sustainability-related patents, blue denotes "green" patents related to environmental themes, and turquoise represents "blue" patents related to improving conditions and addressing unmet sustainable development needs.



Source: Journal of Cleaner Production, Incrementum AG

With 7.8% of their total patents related to sustainability,[462] the mining industry, a big part of the Materials sector, is not only an early adopter but also a leader in regard to their commitment to R&D and mitigating ESG-related risks. Many of the patents help either to lower the costs of

462 *See* Van der Waal, Johannes, Thijssens, Thomas and Maas, Karen: "The innovative contribution of multinational enterprises to the Sustainable Development Goals", *Journal of Cleaner Production*, Vol. 285, February 2021

operating or to reduce the externalities of the mining process. An example is the patent for a mining method for stopping inclined extremely thin ore veins.[463] Not only does the method help to reduce costs, but it also reduces the mining of sterile rock, leading to smaller tailings and reduces the energy used for the entire process. Other patents in development, such as this one for "Methods, Materials and Techniques for Precious Metal Recovery,[464] can lead to less use of contaminants while increasing gold recovery in the leaching process. This consequently means less contaminants to treat, reduced costs, and improved project economics.

Gold Miners' Success Stories

There is a credible, albeit challenging, way toward net zero emissions by 2050.
Terry Heymann
World Gold Council

It is easy to forget all the efforts that the gold mining sector has poured into sustainability issues in the past few years. Many funds and organizations are now updating the markets by chronicling the hard work the sector has done to improve its ESG performance across the board.

In that regard, our partner Baker Steel Capital Managers[465] has collected information on over 120 mining companies located around the world. They found that the mining sector has made noteworthy progress towards achieving ESG goals, especially in the fields of energy efficiency, water efficiency, and emissions reduction across the sector, as well as improved safety for staff. For example:

- Over the past 15 years, US mines have seen a 63% reduction in the fatal injury rate.
- 75% have a dedicated sustainability committee.
- 80% have energy efficiency, water efficiency, and emissions reduction policies.
- 90% of companies have ethics and human rights policies.[466]

In measuring the efforts of the gold mining sector towards sustainability, the most relevant actor is the World Gold Council. In September 2020 they published a new report highlighting gold mining's contribution to the UN Sustainable Development Goals.[467] Their research focuses on case studies and examples of miners all over the globe helping to advance and promote sustainability and the 17 UN Sustainable Development Goals.

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463 Patent: CN110005412B, 2019
464 Patent: US20190233917A1, 2019
465 *See* Incrementum Baker Steel Precious Metals Fund
466 "ESG versus performance? For investors in mining it shouldn't be a choice", *Research & Insights*, Baker Steel Capital Managers LLP, April 11, 2021
467 *See* World Gold Council: "Gold Mining's Contribution to the UN Sustainable Development Goals", September 2020

Gold miners' 17 SDG initiatives: selected projects

Source: World Gold Council

Mining companies that commit to the Responsible Gold Mining Principles have enhanced the lives of all their stakeholders. The RGMP and the SDGs share the same objectives through four main pillars: global partnership, social inclusion, economic development, and responsible operations, energy and environment.

Mining companies have helped to improve local communities all over the globe, and we present just a few examples contained in the WGC report in the following table:

Company	Theme	Project	Solution	Impact
Agnico Eagle	Environment	Remediation	Building a new leach pad extension on a pit that had already served its useful life	Smaller environmental footprint, smaller risk than building new leach pad on steep slopes
AngloGold Ashanti	Global partnership	Fighting malaria in Ghana	USD 1.5mn investment in three years	Reduced malaria in local community by 74%
Endeavour Mining	Social inclusion	Gender equality	Develop training programs exclusively for woman	22 women driving 72-tonne dump truck
Barrick Gold	Economic development	Sustainable industrialisation	Build an 11MW hydropower plant	Free electricity to the local communities and a legacy asset
IAMGOLD	Environment	Access to water	USD 1.5mn phase 1 and USD 13.14mn phase 2 project	Safe water for 100,000 people in Sahel and then for more than 250,000

Source: World Gold Council, Incrementum AG

What Are Our Premium Partners Doing on ESG?

In this chapter, we have covered some of the big trends in the mining sector. We now turn our attention to the way ESG principles are being implemented by some of our Premium Partners in gold and silver mining. We provide a brief summary of each partner's ESG activities below.

Agnico Eagle

Agnico Eagle understands that ESG considerations are not a burden but an opportunity to drive improved performance and deliver on our vision to build a growing, high-quality, low risk, sustainable business.
Sean Boyd
CEO, Agnico Eagle Mines

Agnico Eagle is a Canadian gold producer with operations in Canada, Finland and Mexico. They have one of the lowest greenhouse gas emissions (GHG) intensities within their peer group. The company is achieving this by sourcing 52% of their electricity from renewable sources and implementing a range of GHG reduction initiatives. Within its operations in the Canadian region of Nunavut, Agnico Eagle is considering utilizing wind power generation, and has already obtained permits to make this possible at their Hope Bay Mine.

You can read more about Agnico Eagle's ESG activities via the section of their excellent website dedicated to sustainability.[468] Also, in 2020 Agnico Eagle published a comprehensive sustainability report that contains a thorough overview of their activities.[469]

Gatos Silver

We are always identifying opportunities to minimize our environmental impact while empowering economic vitality in the communities where we operate.
Gatos Silver website

Gatos Silver is a US-based silver company focused on high-grade silver deposits in geopolitically stable jurisdictions. They place employee safety and environmental protection at the heart of their operations. The company provides comprehensive benefits to local employees that include education assistance, medical care support, and the provision of clean, sustainable water.

Gatos Silver strives to hire locally. Currently, 60% of their employees reside in Chihuahua State, where their mine is situated. They are also very attentive to gender diversity: 20% of their workforce are women, well above average for the sector.

Gatos Silver have built San Jose del Sitio's first full-time medical clinic and have been implementing comprehensive measures to prevent the spread of Covid-19. Their website contains more information about their sustainability activities.[470]

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468 Agnico Eagle: Our Sustainability Commitment
469 Agnico Eagle: Sustainability Report 2020
470 Gatos Silver: Corporate Sustainability

NOVAGOLD

Over the past year, NOVAGOLD has worked with our partners to develop an intentional and methodical process for shaping how the company reports information on environmental, social, and governance matters to all stakeholders.
Greg Lang
CEO, NOVAGOLD

NOVAGOLD is a Canadian mining company. They are committed to responsible mining, protection of human life, encouragement of good health, good stewardship of the environment, and adding value to the communities in which they work. The company has placed ESG principles at the heart of their business strategy for 25 years, but it is only recently that they have begun to quantify this activity with detailed metrics, which were developed in partnership with Barrick Gold.[471]

NOVAGOLD's 2020 sustainability report goes into great detail on their activities.[472] Reflecting the importance NOVAGOLD attaches to sustainability, they have recently revamped the sustainability page of their website,[473] which contains a range of resources for those looking for a deeper dive into the company's ESG activities.

Osisko Gold Royalties

We perform well under an ESG lens due to the nature of our non-operating business model, the quality and jurisdictional advantages of our portfolio, and the importance our operating partners place on sustainability. Nevertheless, we intend to go further and strive to be part of the solutions for a Net-Zero world.
Sandeep Singh
CEO, Osisko Gold Royalties

Osisko Gold Royalties Ltd is a Canadian company that holds royalties in gold, silver and diamond mines. Osisko have been stepping up their ambitions to become a leader in the ESG space, focusing on decarbonization. In 2020 they released their inaugural ESG report, committed to global decarbonization through strategic partnerships and committed to the United Nations Global Compact, the world's largest voluntary corporate sustainability initiative.

Osisko has announced a strategic partnership with Carbon Streaming – an investment vehicle that offers investors exposure to carbon credits – to help promote global decarbonization and biodiversity projects. Osisko's investment totaled CAD 3.5mn for a 14.3% stake in the company.

Osisko's reporting contains details of the ambitious actions they have undertaken to become an ESG leader. [474]

Victoria Gold Corp

Victoria Gold believes that ESG is not just a matter of 'doing the right thing' but that there is also a business case for doing so and that it will create value for our shareholders.
John McConnell
CEO, Victoria Gold Corp

Victoria Gold Corp. acquires, operates, explores, and develops mineral properties in Canada and the United States. Their ESG strategy has four pillars: health and safety, community investment, environmental stewardship, and local employment within Canada's Yukon Territory.

In the course of over 3 million person-hours of employee working time, only three "lost time incidents" due to accidents have occurred at Victoria Gold Corp sites. The company works extensively with local businesses and has agreed an impressive CAD 200mn of contracts with local companies. Victoria Gold Corp is also the largest private employer in Yukon, employing 350–400 people, 50% of whom are Yukoners and 25% of whom are women. Their website has a community page that contains more information about the actions they are undertaking on ESG.[475]

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[471] Novagold: Sustainability Summary Donlin Gold Project Reporting Site Inputs - 2020
[472] Novagold: 2020 Sustainability Summary
[473] Novagold: Corporate Social Responsibility
[474] Osisko Gold Royalties: ESG Reporting
[475] Victoria Gold Corp: Community

Hecla Mining

Hecla believes responsible mining is about being transparent and open, a commitment to the safety of our people, the protection of the environment, sound and effective corporate governance and social policies, and continuous improvement through technological innovation.
Phillips S. Baker, Jr.
CEO, Hecla Mining

Hecla Mining is a silver, gold and other precious metals mining company based in Coeur d'Alene, Idaho. They are the largest silver producer in the United States. Hecla are making efforts to address climate change by reducing the carbon emissions of their operations. By harnessing hydropower at their Greens Creek site they were able to reduce overall GHG emissions by 36% in 2020 based on 2019 levels.

Hecla's 2020 sustainability report provides details of their impressive 2020 performance despite global challenges, as well as the varied measures the company is undertaking to support ESG objectives.[476]

Ximen Mining Corp

Ximen Mining is a mining exploration and development company based in Vancouver, Canada. They are committed to leadership in sustainable mining, environmental protection, responsible development, and safety in the workplace.

A greener economy cannot exist without mining. It is our responsibility as a mining exploration and development company, to implement green solutions and technology in all our operations whenever feasible. We believe we are part of the solution, contributing to the survival of our industry and our planet.
Christopher R Anderson
CEO, Ximen Mining

Water resources preservation is a key priority for Ximen. Their Kenville Mine in British Columbia discharges water that is clean enough to drink. Studies are also underway to harness power from the run-off water of their mine portals, so that turbines can be used to power long-life LED lighting. Another objective of Ximen's Kenville Project has been to eliminate diesel and fossil fuel emissions from their operations wherever possible. Their primary power source is electricity supplied from the Kootenay hydroelectric generation system.

In an effort to reduce carbon emissions, 99% of Ximen's underground and development equipment is pneumatic and powered by an air compressor drawing on hydropower. Remaining equipment is powered by new high-efficiency diesel. Plans are also underway to install solar power on Ximen's Kenville site. Ximen's website contains more information about their efforts to maximize the sustainability of their operations.[477]

Endeavour Silver

While our operations shut down for over a month due to lockdown measures in Mexico, we continued paying everyone, kept them informed and offered support. We did not lay off or lose employees.
Ken Pickering
Sustainability Committee Chair, Endeavour Silver

Endeavour Silver Corp. engages in the evaluation, acquisition, exploration and development of precious metal properties, primarily silver in Mexico. Their Sustainability Strategy covers five core areas: safety and health, people, community, environment, and economic value. Supporting the United Nations Sustainability Development Goals is at the core of the Endeavour Silver's strategy.

In 2020 Endeavour Silver invested USD 1.5mn in environmental protection measures, achieved a 90% water recycling and reuse rate, reduced their GHG emissions by 34% based on 2019 levels, and supported the planting of 44,000 trees through a reforestation initiative.

Endeavour Silver's brand-new sustainability report contains a great wealth of information about their ESG initiatives.[478]

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[476] Hecla Mining: 2020 Sustainability Report
[477] Ximen: Sustainability
[478] Endeavour Silver: 2020 Sustainability Report

Solgold

Our goal is to undertake our operations in an environmentally responsible manner by integrating the protection of the environment into our everyday working practices.
Solgold website

Solgold is a leading exploration company focused on the discovery and definition of world-class copper and gold deposits. The company is headquartered in Brisbane, Australia.

Solgold is committed to sustainable exploration and mining. They see transparent and responsible practices as critical to long-term success. Their priorities are their people, their communities and protection of the environment.

Solgold aims to achieve an injury-free workplace, equal opportunities for all employees, a proactive contribution to local communities, the implementation of responsible mining practices, rehabilitation and reforestation of land, and responsible use of energy.

Solgold's website contains more information about their sustainability initiatives.[479]

The Road to the Paris Accord

> *"Mining companies nowadays have to satisfy investors, local communities, and governments by demonstrating that they are serious about dealing with energy transition and aiming for net-zero sustainability."*
> Tim Biggs, Deloitte EMEA and UK

A vision, without a plan, is just a hallucination.
Will Rogers

The World Gold Council also recently published their view on the potential pathways to net-zero emissions for the gold mining industry.[480] As stated in the *In Gold We Trust* report 2020, the energy transition is the most notable change driving the gold mining sector into the new decarbonization economy.[481] Gold as a physical asset is one of if not the most carbon-neutral investments over its lifespan, due to its physical properties, as we note in the *In Gold We Trust* report 2019.[482]

However, more can be done to reduce emissions produced by mining operations. In their report, the WGC estimates that up to 95% of these emissions come from energy consumption.

There must be a better way to make the things we want, a way that doesn't spoil the sky or the rain or the land.
Paul McCartney

By investing in energy transformation projects as soon as possible, the gold mining companies could reduce their emissions by 27% by year 2030 and therefore be roughly on target to meet the Paris Accord emissions objectives for 2050. As seen in the chart below, there is plenty of room for amelioration. Moving towards renewable energy is the sector's most valuable challenge of the next decade.

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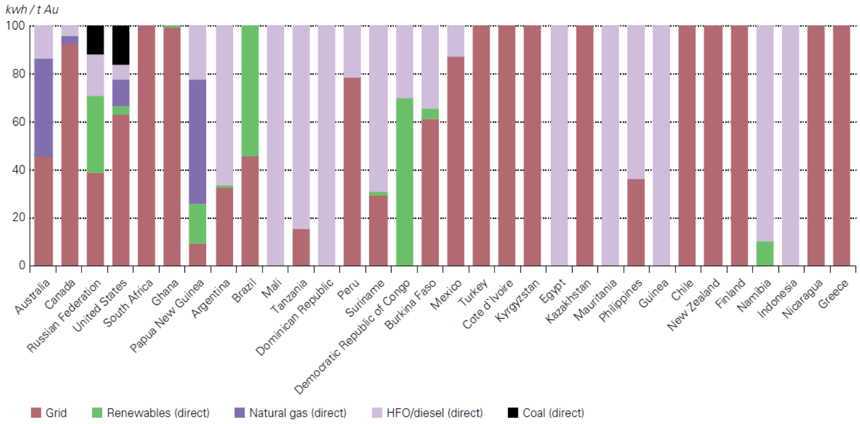
479 SolGold: Our Sustainable Approach
480 *See* "Gold and climate change: The energy transition", World Gold Council, December 9, 2020
481 *See* "ESG Compliance and Financial Stability", *In Gold We Trust* report 2020
482 *See* "ESG: Environment, Social, Governance–Three words worth more than USD 20 trillion?" *In Gold We Trust* report 2019

Mining companies energy source per country



Source: Wood Mackenzie

Conclusion

> *"The reality is that 'ESG is a real indicator of financial performance."*
>
> Terence Lyons

In recognition of ESG's growing importance, we have chosen to make it a key topic of our *In Gold We Trust* report for a third consecutive year. Clearly, the gold mining sector is committed to helping solve ESG issues and improve on their legacy of the past, and a new generation of activist and solution-oriented stakeholders is ready to take the industry by storm.

Mining companies did not recently suddenly discover ESG, only the investors did.
Bradford Cooke
CEO, Endeavour Silver

From striving to reach the goals of the Paris Accord on time, to decarbonizing the industry and implementing the UN's 17 SDGs, every day that passes is one step further on the road to a sustainable gold mining future. We can only hope that investors will keep being vocal about their own ESG priorities and that, in return, executives will lean towards implementing the changes demanded by their shareholders.

Companies and stakeholders will dance to the beat, while the rating agencies will be listening to the lyrics: "*Every breath you take / Every move you make / I'll be watching you*".

Technical Analysis

"The waiting is the hardest part. Every day you see one more card. You take it on faith, you take it to the heart. The waiting is the hardest part."

Tom Petty and the Heartbreakers

Key Takeaways

- The analysis of market structure, sentiment and price patterns leads us to a positive technical assessment.
- Since the all-time high in August last year, a speculative shakeout has taken place, which should provide a healthy foundation for further price increases.
- The Coppock indicator generated a long-term buy signal at the end of 2015, and now it seems that the cup-handle formation will soon resolve to the upside. The price target of this formation is USD 2,700.
- A seasonal analysis of the gold price shows a setting in of seasonal headwinds from the end of May, which reverse again at the beginning of July. In post-election years June is – after January – the second weakest month.
- The recent increase in the relative strength of silver and mining stocks support our confidence. The conditions for the continuation of the new bull market seem excellent from a technical perspective.

Following our comprehensive macroeconomic and fundamental analysis, we now turn to the technical analysis of the gold price. Last year we wrote in this space:

> *"From the point of view of current market sentiment, seasonality, and the CoT report, we would not be surprised to see a several-week "chill-out" phase at the moment. However, we do not expect a deep correction, as great buying interest appears to be waiting on the sidelines to "buy the dips". The recent rise in the relative strength of silver and mining stocks also gives us confidence. Thus, the conditions for the continuation of the new gold bull market seem excellent from a technical point of view."*[483]

This assessment has turned out to be partially correct. A few days after the publication of the *In Gold We Trust* report 2020, an impulsive move started, which lifted the gold price to new all-time highs. The heavily overbought situation gradually unwound over the next few months, culminating in a double low in March 2021. **The support level at USD 1,680 marked exactly the 38.2% Fibonacci retracement of the uptrend from 2015 to 2020.**

Time is more important than price. When time is up price will reverse.
W. D. Gann

What is our current technical assessment of the gold price? For the long-term assessment, we once again refer to the Coppock curve, a reliable momentum indicator.[484] A buy signal occurs when the indicator, which is below the zero line, turns upwards, i.e. assumes a positive value. The advantage of this indicator is that you can reliably detect major trend changes. Since the end of 2015 the indicator has been on "buy". Since summer 2020 the curve has been trending slightly south, but it is still clearly in positive territory. The KST[485] confirms the positive long-term setup.

We noted ahead that proper handle-making would require several months. Now, 10 months later, it's a thing of beauty.
NFTRH

The long-term cup-handle formation, which could now soon be resolved, is particularly interesting. The correction since August 2020 appears as the handle part of the formation. The price target can be estimated by measuring the distance from the right edge of the cup to the bottom of the cup and then extended further in the direction of the breakout area. **Accordingly, the price target of the formation is around USD 2,700.**

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483 "Technical Analysis", *In Gold We Trust* report 2020, p. 337
484 Specifically, we have two time-weighted momentum curves that are added together and whose long-term moving average is the Coppock line. We use a somewhat modified Coppock with slightly longer periodicities.
485 "Known Sure Thing" indicator by Martin Pring. The KST measures the price momentum of four different price cycles.

Gold, KST and Coppock indicator, monthly, 2007-2021

Source: Tradingview, Incrementum AG

The public buys the most at the top and the least at the bottom.
Bob Farrell

Let's now take a look at market sentiment. Naturally, analysts become increasingly optimistic as a bull market continues, and vice versa. In the course of the correction of recent months, price targets have been lowered in the usual procyclical manner. If we look at the forecasts of April 20, 2021 for the end of 2021, a median price of USD 1,777 is expected. The year-end price targets for subsequent years are: USD 1,700 (2022), USD 1,650 (2023), USD 1,610 (2024) and USD 1,624 (2025), i.e. a sustained sideways movement. This would be a development that – with respect to market cycles – seems extremely unlikely.

Bloomberg: Analyst consensus for gold: 2021-2025

Consensus	Spot	As Of	2021	2022	2023	2024	2025
Median		04/20/21	1777.00	1700.00	1650.00	1610.00	1624.00
Mean		04/20/21	1785.47	1753.38	1659.50	1605.83	1599.50
High		04/20/21	1950.00	2200.00	1777.00	1725.00	1750.00
Low		04/20/21	1649.20	1450.00	1540.00	1470.00	1400.00
Forward	1777.83	04/26/21	1779.88	1789.76	1808.75	1847.13	1889.79

Source: Bloomberg

An object at rest tends to stay at rest and an object in motion tends to stay in motion with the same speed and in the same direction unless acted upon by an unbalanced force.
Isaac Newton, First Law of Motion

The picture is similar for silver. At the end of the year, a median price of USD 25.50 is expected, followed by a fall to USD 23.70 in 2022 and USD 22.50 in 2023. However, the consensus is no longer really meaningful or informative, because the number of active coverages on the part of banks has been reduced significantly in recent years. This confirms our hypothesis that silver is as popular in the financial sector as a Brussels sprouts casserole is for carnivores.

Bloomberg: Analyst consensus for silver: 2021-2025

Consensus	Spot	As Of	2021	2022	2023	2024	2025
Median		04/20/21	25.50	23.70	22.50	21.90	24.45
Mean		04/20/21	25.49	24.52	23.35	23.48	25.35
High		04/20/21	29.00	31.30	30.80	32.00	33.00
Low		04/20/21	19.63	19.50	19.25	17.02	19.50
Forward	26.01	04/26/21	26.04	26.27	26.88	28.26	28.94

Source: Bloomberg

The combination of continued relatively low interest in gold and silver from investors and the lack of price action from analysts is, in our opinion, an excellent foundation for a continuation of the rally.

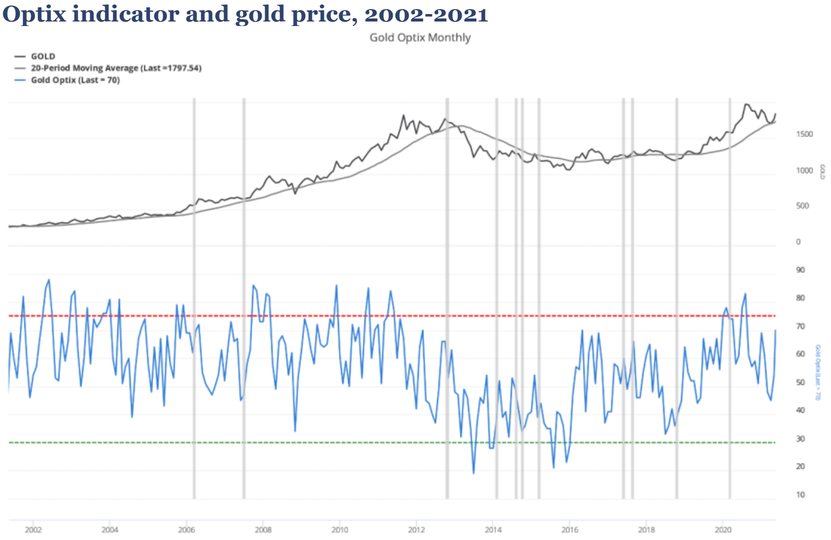
The one who follows the crowd will usually get no further than the crowd. The one who walks alone, is likely to find himself in places no one has ever been.
Albert Einstein

One of our favorite sentiment indicators is Sentimentrader's Optix Index. This index tracks the most common sentiment indicators as well as data from the futures and options markets. The underlying logic of this barometer is a simple one. When public opinion forms a strong consensus, this broad consensus is a good contra-indicator. The market is usually too bullish when prices have already risen (sharply) and too bearish when they have already fallen (sharply).

Try to see it my way. Only time will tell if I am right or I am wrong. While you see it your way, there's a chance that we may fall apart before too long.
The Beatles, *"We Can Work It Out"*

If the Optix Index rises above the red dotted line at 75 points, it is time to become more cautious. If it is at 30 points or below, on the other hand, pessimism is pronounced, and the downside risk is limited. Currently, the Optix Index stands at 70 and is thus in optimistic territory. It can also be seen that no sentiment lows were marked in the course of the correction in recent months. This confirms our assessment that sentiment has clearly brightened since March and that the mood in the sector is fundamentally positive.

Optix indicator and gold price, 2002-2021



Source: Sentimentrader.com

Never invest on the basis of a story on page one. Invest on the basis of a story on page sixteen, that's headed to page one.
Don Coxe

Regarding the mood in the silver sector, we wrote last year: "*At Silver, the party doesn't seem to have really started yet, although the guests are slowly arriving.*"[486] More party guests have indeed arrived recently, not least due to the Reddit squeeze. The Optix Index is currently trading at 71, close to the euphoria level. Interestingly, the panic low at USD 11.80 in March 2020 did not lead to any new sentiment lows, thus forming a small positive divergence.

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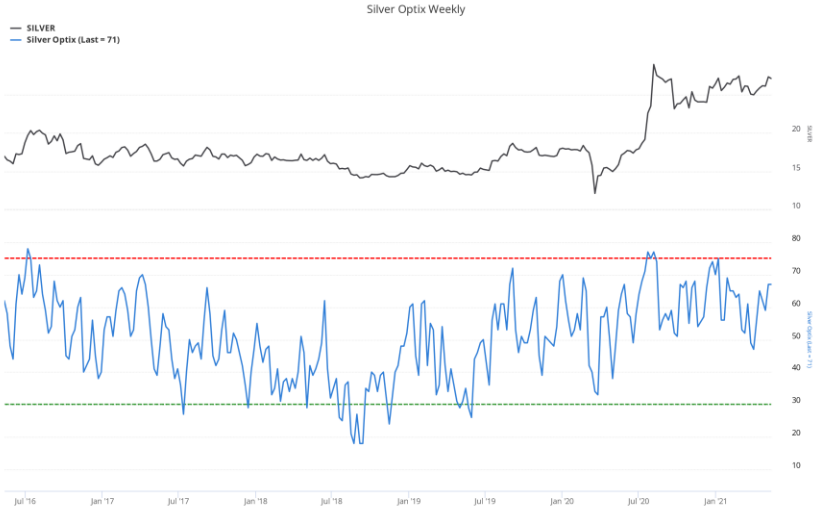
[486] "Technical Analysis", *In Gold We Trust* report 2020, p. 331

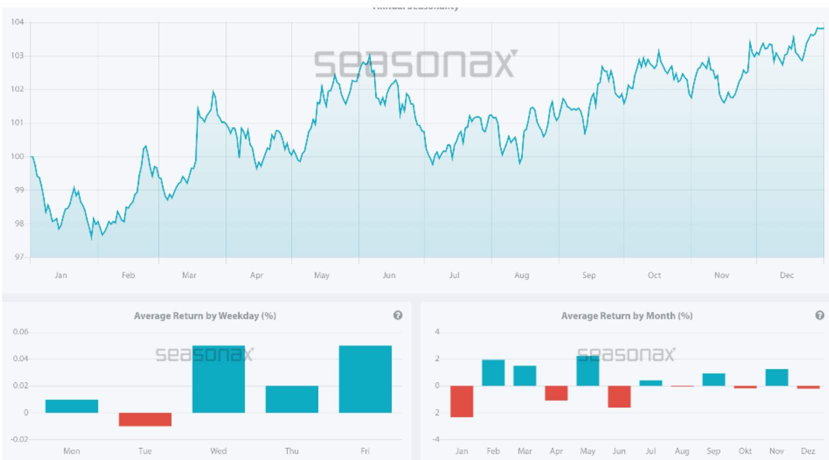
Optix indicator and silver price, 2016-2021



Source: Sentimentrader.com

Also this year, we want to take a brief look at seasonal patterns. The following chart shows the annual development of gold in US post-election years. It can be clearly seen that seasonal headwinds set in from the end of May but reverse again at the beginning of July.[487] June is – after January – the second weakest month in post-election years.

Seasonality of gold in post-election years



Source: Seasonax.com

In silver, a strong seasonal uptrend can be seen from July. June marks the weakest month; and on a weekly basis, Monday seems to be predestined for anticyclical buying.

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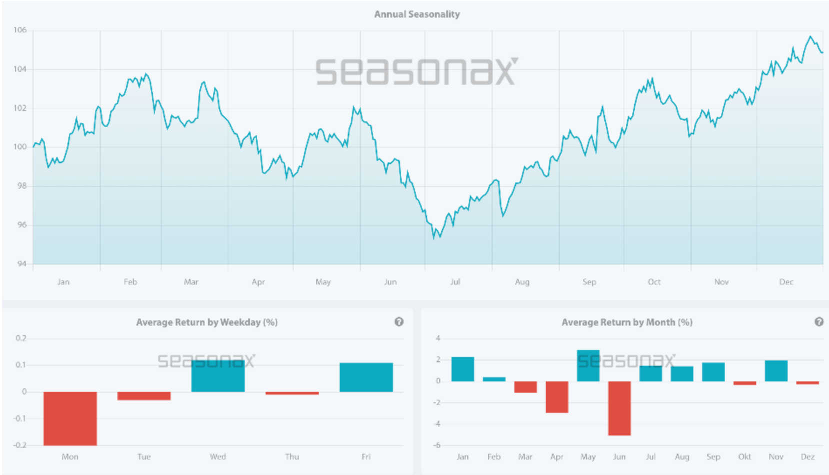
487 The seasonal charts were provided to us by Dimitri Speck, founder and chief analyst of Seasonax. Use the insights from www.seasonax.com to examine recurring patterns of various financial instruments (stocks, commodities, (crypto)currencies) and identify investment opportunities even more efficiently.

Seasonality of silver in post-election years



Source: Seasonax.com

The Midas Touch Gold Model™[488]

> *"Life is just a series of peaks and troughs. And you don't know whether you're in a trough until you're climbing out, or on a peak until you're coming down."*
>
> Ricky Gervais

The first principle is that you must not fool yourself – and you are the easiest person to fool.
Richard Feynman

As in previous years, we would like to present the current status of the Midas Touch Gold Model™[489] and give you a short- to medium-term outlook by Florian Grummes. The strengths of the model are found in its versatility and quantitative measurability, because it carefully examines many different perspectives on the gold market and brings them together in one clearly laid out table.

Source: Tradingview.com, Florian Grummes, Midas Touch Consulting

[488] We would like to thank Florian Grummes for this digression. Florian is the founder and CEO of Midas Touch Consulting (www.midastouch-consulting.com). Our readers can sign up for free updates and the associated newsletter at the following link: http://eepurl.com/ccKg2r
[489] For a detailed description of the model and its philosophy, *see* "Technical Analysis", *In Gold We Trust* report 2016

The gold price reached a new all-time high on August 7, 2020, with prices around USD 2,075, and then entered a correction that lasted almost nine months. This correction was rather tough and confusing until the end of November 2020, and the sell-off accelerated at the beginning of January. Only with a double low at USD 1,676 on March 8 and USD 1,678 on March 31 did the gold market finally bottom out. Most likely, this double low marked the end of the correction and gold is now again on the way to higher prices and thus, in the medium to longer term, also towards new all-time highs.

To anticipate the market is to gamble. To be patient and react only when the market gives the signal is to speculate.
Jesse Livermore

A correction, on the order of a good USD 400, had become necessary last summer due to excessive exuberance, and it was definitely healthy for the big picture. With a strongly oversold situation and relatively pessimistic sentiment values, the foundation for the next upward movement should have been laid under high trading volume in the area around USD 1,700. While platinum and palladium were able to largely escape this correction, the gold price setback left clear traces on the vast majority of mining stocks. Silver, on the other hand, dipped into a month-long sideways phase and has so far been able to hold up somewhat better than gold.

The Midas Touch Gold Model™ May 15th 2021 (Version 1.3)

Gold USD - Monthly Chart	USD 1,843.16	Sell signal 02/19/21, reversal @ USD 2,037.44			Bearish
Gold USD - Weekly Chart	USD 1,843.16	Buy signal 05/06/21, reversal @ USD 1,685.70	Bullish		
Gold USD - Daily Chart	USD 1,843.16	Buy signal 05/03/21, reversal @ USD 1,796,05	Bullish		
Gold Volatility CBOE Index	16.75	Low volatility levels are bullish for gold from a contrarian perspective	Bullish		
Gold CoT-Report	-227,084	Commercial shortposition too high since 2 yrs, therefore relativisation		Neutral	
Gold Sentiment	70	Sentiment just about neutral		Neutral	
Gold Seasonality	May	Until end of June negative seasonal cycle			Bearish
Ratio DowJones/Gold	18.71	Sell signal 04/26/21, reversal @ 19.36; bullish for gold	Bullish		
Ratio Gold/Silver	67.21	Buy signal 12/14/20, reversal @ 68.71	Bullish		
Ratio Gold/Oil	28.12	Sell signal 05/04/21, reversal @ 25.87	Bullish		
Ratio Gold/Commodities (GNX)	3.57	Sell signal 05/11/20, reversal @ 3.58			Bearish
Ratio Bitcoin/Gold	26.50	Sell signal 05/13/21, reversal @ 32.30; bullish for gold	Bullish		
SPDR Gold Trust Holdings (GLD)	1,028.36t	Plus 11,32t during the last two weeks	Bullish		
Gold in $, €, £, ¥	4 out of 4	Gold up against USD, EUR, GBP and JPY over one month	Bullish		
Gold in Indian Rupee	INR 135,013	Buy signal 05/07/21, reversal @ INR 131,315	Bullish		
Gold in Chinese Yuan	CNY 11,864	Buy signal 05/04/21, reversal @ CNY 11,539	Bullish		
GDX Goldminers - Daily Chart	USD 37.84	Buy signal 05/04/21, reversal @ USD 35.69	Bullish		
GDX Goldminers Sentiment	70	Sentiment too optimistic			Bearish
US-Dollar - Daily Chart	USD 90.30	Sell signal 05/07/21, reversal @ USD 91.12; bullish for gold	Bullish		
US-Dollar CoT-Report	-5,008	Commercials only hold a very small shortposition on the US-Dollar		Neutral	
US Real Interest Rate	-3.075%	3-month T-bill yield (0.1%) - change in the CPI (3.175%)	Bullish		

Gold Model is in slightly bullish mode since May 5th, 2021

in gold we trust .report — © 2021 Midas Touch Consulting/Florian Grummes — MIDAS TOUCH CONSULTING

The illusion of randomness gradually disappears as the skill in chart reading improves.
John Murphy

The Midas Touch Gold Model™ gradually switched back to bullish mode in April 2021. With the breakout above USD 1,800 on May 5, the signal strengthened to "strongly bullish". This was also helped by the gold price's new buy signals against the Indian rupee, against the Chinese renminbi, and against the US dollar. In addition, the gold mining stocks (GDX Gold Miners ETF) provided a bullish signal again from May 4. On top of that, the now clearly negative real interest rates in the US have been supporting the gold price for months. In addition to the overly optimistic sentiment, the only unfavorable factor in the coming weeks is the seasonal component, because typically the strongest phase of the year in the gold market begins in June at the earliest, but usually not until July.

The following additional interesting conclusions can currently be drawn from the Midas Touch Gold Model™:

- **On the monthly chart for the gold price against the US dollar, a sell signal is still active.** This would currently only be negated at prices above

USD 2,037. Until the big picture clearly swings back to bullish, the gold bulls still have work to do.

- **Against the commodities, the gold price is on the verge of a buy signal.** After the last months were characterized by exploding base-metal and energy prices, there could be a change of favorites back to gold in the next few months.
- Bitcoin has mercilessly outperformed the gold price in recent months. **With Bitcoin's pullback below USD 50,000, a fresh buy signal for gold against Bitcoin emerged on May 13**. This change of favorites has been clearly confirmed with Bitcoin's crash to USD 29,500 on May 19.

Your best work involves timing. If someone wrote the best hip hop song of all time in the Middle Ages, he had bad timing.
Scott Adams

On the daily chart, gold has easily surpassed the downtrend of the last nine months and has already reached prices around USD 1,890 in the meantime. The bulls were also able to regain the slightly falling 200-day moving average (USD 1,845). On top of that, the (actually overbought) stochastic has transformed to ultra-bullish embedded status, which means that the bulls are clearly in control.

Source: Tradingview.com, Florian Grummes, Midas Touch Consulting

Despite this bullish constellation, however, a temporary failure of the recovery rally below or at the psychological mark of USD 1,800 would not come as a surprise. With a pullback towards around USD 1,820 to USD 1,850, gold could draw new strength to then continue its march higher. A volatile consolidation around the 200-day moving average (+/- USD 40) is also conceivable.

In the bigger picture, gold must overcome the strong resistance at USD 1,965. Here all the bullish efforts failed at the beginning of November as well as at the beginning of January, and both times a very quick and sharp sell-off followed. Obviously, there is still a long way to go before this level will be breached.

Realistically, one should therefore assume that the gold market still needs some time before a sustainable breakout above this strong resistance zone can happen. **As soon as this succeeds, however, the way would be clear towards the psychological mark of USD 2,000 and the all-time high at USD 2,075.**

Conclusion

> *"We believe that now is the time to start layering in gold exposure, not when the rest of the world tries to do so."*
>
> John Hathaway

Great opportunities do not come every year.
Charles Dow

Despite some weaknesses, technical analysis is a useful tool for determining the location and timing of investments. It is always important for us to understand the "big picture" not only from a fundamental but also from a technical perspective.

The secret to being successful from a trading perspective is to have an indefatigable and an undying and unquenchable thirst for information and knowledge.
Paul Tudor Jones

The analysis of market structure, sentiment, and price patterns leads us to a positive technical assessment. Since the all-time high in August last year, a speculative shakeout has taken place, which should provide a healthy foundation for further price increases. The Coppock indicator generated a long-term buy signal at the end of 2015, and now it appears that the cup-and-handle formation will soon resolve to the upside. **The recent increase in the relative strength of silver and the mining stocks also gives us clear confidence. In this respect, the conditions for the continuation of the new bull market seem excellent from a technical perspective.**

TUDOR GOLD

Why Invest in TUDOR GOLD Corp.?

Initial Mineral Resource Announced in March 2021 – Treaty Creek is one of the largest gold discoveries of the last 30 years!

- **19.4 million ounces of 0.74 g/t AuEq** (M&I) plus **7.9 million ounces of 0.79 g/t AuEq** (Inferred).

Excellent Geopolitical Climate for Investment and Developing Large Deposits

- Tudor controls over 35,000 Ha in the Golden Triangle bordering the world-class KSM (Seabridge Gold) and Valley of the Kings (Pretium Resources) deposits.
- Excellent infrastructure in mining friendly jurisdiction in B.C. (Canada), that host numerous famous past producers. Current operations in the region include Red Chris open-pit and block cave deposits with Skeena Resources advancing the Eskay Creek Project towards open pit production.
- Positive involvement from First Nations directly associated with Mines and advanced projects such as Treaty Creek, with include signed engagement contracts to fast-track exploration and permitting processes.

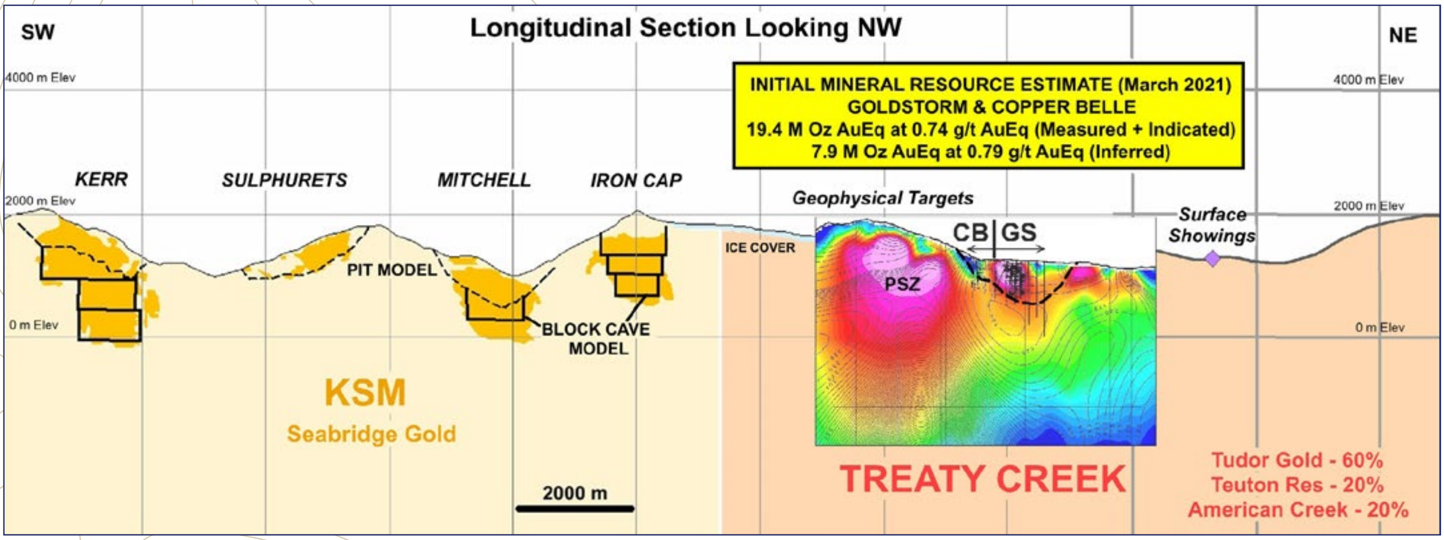
Strong Shareholders and Top Management

- Close to 50% owned by CEO and **Walter Storm** (co-founder of Osisko Mining) and billionaire **Eric Sprott. Ken Konkin,** (P.Geo), award winning geologist, instrumental in the discovery of the Valley of the Kings deposit, is leading the drill program.

Excellent Exploration Potential for discovery of other Mineralized Systems similar to Goldstorm Deposit

- Goldstorm Zone remains open in all directions and depth – Tudor plans an extensive drill program in 2021.
- Several high potential drill targets exist on the property, some of which have returned significant gold values from limited drilling.

Treaty Creek – One of the Largest Gold Discoveries of the last 30 years!



Quo vadis, aurum?

“Tomorrow belongs to those who can hear it coming.”

David Bowie

Key Takeaways

- A profound change is taking place before all our eyes, a monetary climate change. What was today the immutable framework within which we operated seems tomorrow to be no more than a relic of the past.
- This monetary climate change has far-reaching implications - for monetary policy, fiscal policy and investment decisions.
- Traditional, mixed portfolios are subject to significantly higher risk in an inflationary environment, as correlations can break down and both asset classes can suffer significant losses. This is because negative correlation between stocks and bonds is the exception rather than the rule. In 70 of the last 100 years, stocks and bonds have been positively correlated.
- This year, we would also like to venture an outlook on the future price of gold. The implied distribution density function of the gold options market shows that with a probability of almost 45% we will see a new 52-week high – USD 2,100 or higher – in December 2021 and thus also a new all-time high in the gold price at the same time.

Nothing is as permanent as a temporary government program.
Milton Friedman

When Richard Nixon announced the "temporary" suspension of the convertibility of the US dollar into gold on August 15, 1971,[490] no one knew that the closure would last 50 years. It turned out that it was not a temporary measure but a permanent stopgap. Today, half a century later, there is nothing to suggest that this suspension will be voluntarily ended in the foreseeable future. Global fiat money is the convention of today. **Gold backing is even forbidden in the *Articles of Agreement* subscribed to by all members of the International Monetary Fund.[491]**

The pieces are in place for a generational change in mindset relating to inflation, and a change in mindset that alters behavior is self-fulfilling.
Alex Manzara

From our point of view, the dematerialization of the monetary system sealed its unsustainability and its limited lifespan. Nevertheless, courageous central bankers such as Paul Volcker, Karl Otto Pöhl, and Fritz Leutwiler were able to ensure that the money-creation privilege was not unduly strained even in the era of an uncovered money system. If one listens closely, however, doubts prevailed even in central bank circles as to whether the system could be continued indefinitely in this form. **Alan Greenspan made the following comments in 2002:**

> *"In the past there has been considerable evidence that fiat currencies in general have been mismanaged and that inflation has too often been the result. (…) We are learning how to manage a fiat currency. I have always had some considerable skepticism about whether that in the long run can succeed, but I must say to you the evidence of recent decades is that it has been succeeding. Whether that continues is a forecast which I can't really project on."[492]*

The Monetary Consequences of the Covid-19 Pandemic

Life belongs to the living, and he who lives must be prepared for change.
Johann Wolfgang von Goethe

Today, shortly before the 50th anniversary of this drastic monetary change, only a few economists recognize a new fundamental change – possibly because this time the change has been more gradual. It is a process whose start cannot be pinpointed to an exact date. However, it is clear to critical observers that the fiscal and monetary policy interventions during the coronavirus crisis have taken us into a new dimension and will have profound, irreversible consequences that will only fully unfold over a period of years. However, the prevailing narrative regarding the global monetary weather situation continues to be that we are only experiencing some transitory cloudiness in the form of temporarily higher inflation rates.

Too much money ain't enough money.
Lil Wayne

We are of a completely different opinion. A profound change is taking place before all our eyes, a monetary climate change. What today seems still to be an irrevocable framework within which we move, will prove tomorrow to be no more than a broken-down relic. The Covid crisis has the potential to shake up the unbacked monetary system and could ultimately shorten its remaining life expectancy significantly.

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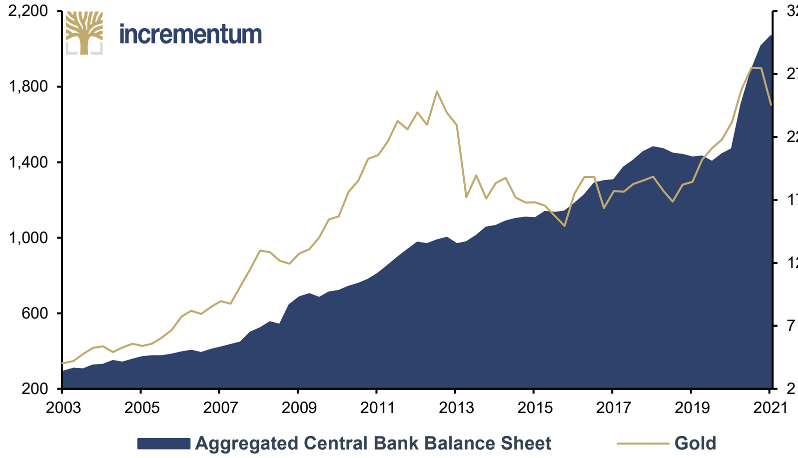
[490] *See* Nixon, Richard: "Address to the Nation Outlining a New Economic Policy: 'The Challenge of Peace'", The American Presidency Project, August 15, 1971
[491] "Articles of Agreement of the International Monetary Fund", Article 2.b., p. 18
[492] "Ron Paul questions Alan Greenspan at monetary policy hearing (2002)", YouTube, March 25, 2011

Gold (lhs), in USD, and Aggregated Central Bank Balance Sheet of SNB, FED, PBoC, BoJ, and ECB (rhs), in USD trn, Q1/2003-Q1/2021



Source: Murenbeeld, Reuters Eikon, Incrementum AG

The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood.
John Maynard Keynes

At the heart of this change is the new economic zeitgeist of fiscal and monetary policymakers. Thus, it is increasingly claimed that overindebtedness has no serious consequences. It is assumed that the digital printing press can be operated at will to monetize debt. It is postulated that monetary inflation has no impact on price inflation. And it is even declared to be the goal to create higher inflation rates rather than guard the purchasing power of the currency.

Redefinition of Price Stability

The beginning of wisdom is the definition of terms.
Socrates

Let us look at the primary monetary policy objective of the ECB – and of many other central banks – "price stability". By price stability, the ECB means a price increase in the basket of goods "of close to, but below, 2% over the medium term". This is a rather peculiar interpretation of "stability", because if consumer prices rise by 2% a year, this corresponds to a loss of purchasing power of just under 22% in 10 years and more than 48% after 20 years.

As part of the ECB's strategy review currently underway, this target definition is being subjected to a comprehensive analysis.[493] As the official inflation rate has been too low in recent years, numerous ECB representatives are advocating higher inflation rates in the future to "compensate" for the supposedly insufficient rise in consumer prices.[494] In doing so, the ECB would be following in the footsteps of the Federal Reserve.

The Fed can change how things look, but not how things are.
Jim Grant

In fact, the main argument for the previous price stability target of inflation "close to, but below 2%" was that there should always be a buffer to the 0% mark. At no time should falling consumer prices be permitted, because in the eyes of the ECB's Governing Council – and almost all economists – the dreaded deflationary spiral would set in. Despite official inflation rates that are "too low" in some areas, the drift into a deflationary spiral has not occurred in

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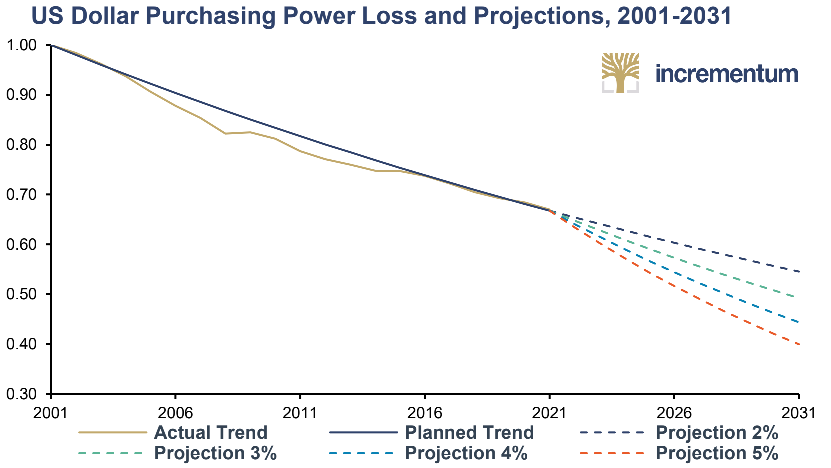
493 *See* ECB: Strategy Review
494 *See* Ilzetki, Ethan: "Rethinking the ECB's inflation objective", voxeu.org, November 16, 2020

recent years. The same narrative applies to the US dollar, which is therefore steadily losing purchasing power and will continue to do so. **And even a small increase in the inflation rate in absolute terms would significantly accelerate the loss of purchasing power over the next 10 years.**



Source: Reuters Eikon, Incrementum AG

Courtesy of Hedgeye

Now that inflation rates have already risen significantly again, according to this line of reasoning it does not make the slightest sense to orchestrate or allow even higher inflation. In our opinion, the new chain of reasoning for a symmetric inflation target is not stringent. It is obvious that higher inflation rates represent a thoroughly intentional demonetization to relieve countries that are heavily indebted. However, two aspects must be considered. On the one hand, a surge in inflation implies a transfer of wealth from creditors to debtors. On the other hand, an inflationary dynamic that sets in is difficult to get under control again. It is not for nothing that central bankers have coined the phrase *"Don't let the inflation genie out of the bottle"*.

Inflation as a Risk for Stock and Bond Markets?

We must base our asset allocation not on the probabilities of choosing the right allocation but on the consequences of choosing the wrong allocation.
Jack Bogle

Four decades of disinflation and falling interest rates have left their mark on the financial markets in particular. Both the stock and bond markets had a structural tailwind from falling inflation rates. The valuation of both asset classes benefited, as future cash flows were discounted at an ever-lower interest rate, driving up valuations. The classic 60/40 portfolio, consisting of 60% equities and 40% bonds, was able to generate respectable returns with moderate risk during this period, as the asset classes complemented each other well.

As we have already shown in our *In Gold We Trust* report 2019,[495] traditional mixed portfolios are subject to significantly higher risk in an inflationary environment, as correlations can break down and both asset classes can suffer significant losses. **This is because negative correlation between stocks and bonds is the exception rather than the rule. In 70 of the last 100 years, stocks and bonds have been positively correlated.**

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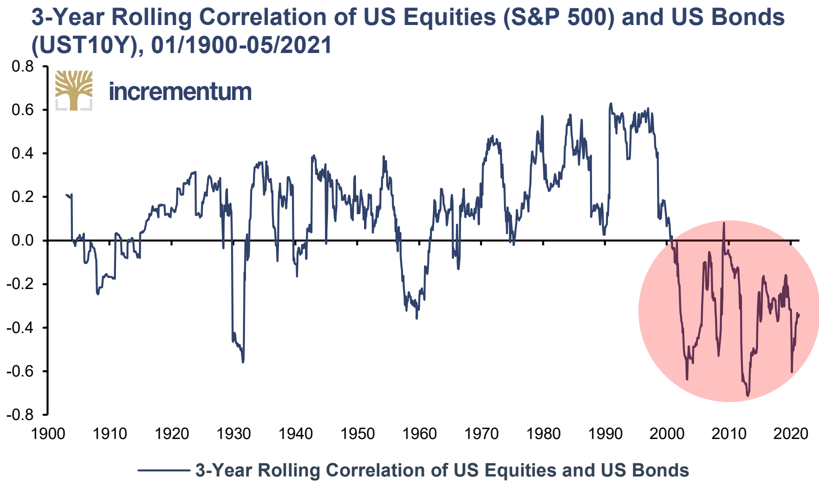
495 *See* "Portfolio characteristics: gold as an equity diversifier in recessions", *In Gold We Trust* report 2019

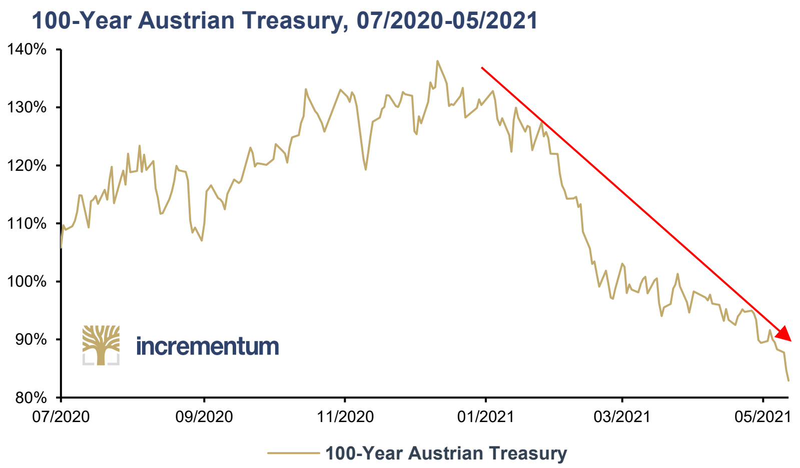


Source: Reserve Bank of Australia, Nick Laird, goldchartsrus.com, Reuters Eikon, Incrementum AG

The longer we remain at zero or negative interest rates, the riskier bonds become, as they no longer have any appreciation potential, but they do have a significant – inflation-driven – interest rate risk and possibly also a default risk. **It is no coincidence that low-yielding bonds have for some time been classified by many market participants as a "returnless risk".**

Most people adapt to and eventually extrapolate so they become overdone, which leads to shifts to new paradigms in which the markets operate more opposite than similar to how they operated during the prior paradigm.
Ray Dalio

The longer the remaining term of the bond, the greater the impact of even small increases in bond yields on the market value of a bond. Even if inflation is moderately higher than expected, holders of long-dated paper will be deprived of a significant portion of their purchasing power. As the following chart of the Austrian century bond shows, even a small increase in yield from 0.45% to 1.13% triggers a price loss of more than 36% since the beginning of the year. Whether many investors are aware of this, especially those who hold bonds indirectly, e.g. in pension or life insurance policies, may be seriously doubted.



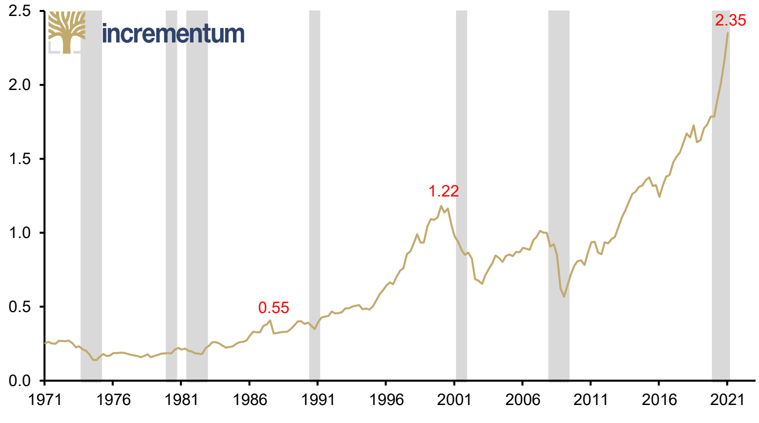
Source: Frankfurt Stock Exchange, Incrementum AG

Our New World Disorder will be characterized by greater volatility, higher inflation and deeper financial repression.
Alexander Chartres

However, the miserable profitability of bonds has also had a significant impact on equities. It is not without reason that for years equities have been regarded as having no alternative. As a result, valuations on the stock markets have risen dramatically. The CAPE ratio is currently at a value of 37, twice as high as in 2011, when gold marked its last all-time high before August 2020. According to the

Buffett indicator[496], the valuation of the stock market compared to US GDP is currently at record levels. **It is astonishing that the Buffett indicator rose during a recession for the first time in history.**

Buffett Indicator, Q1/1971-Q1/2021

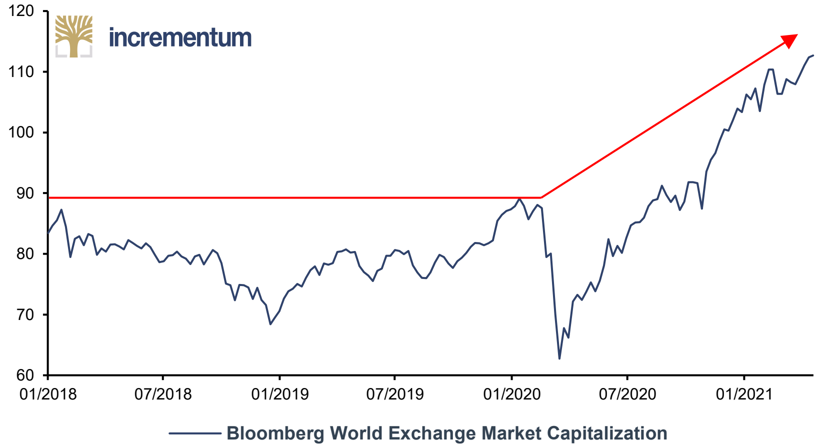


Source: Federal Reserve St. Louis, Wellenreiter-Invest, Incrementum AG

In all affairs it's a healthy thing now and then to hang a question mark on the things you have long taken for granted.
Bertrand Russell

Much of what is currently happening on the capital markets is reminiscent of the term *crack-up boom*, coined by Ludwig von Mises. It is amazing that the market capitalization of the stock markets is now more than USD 20trn higher than before the outbreak of the Covid-19 pandemic. We find it implausible that those higher valuations are justified.

Bloomberg World Exchange Market Capitalization, in USD trn, 01/2018-04/2021



Source: Bloomberg, Incrementum AG

[496] The Buffett indicator is a valuation multiple that compares the capitalization of the US Wilshire 5000 Index to US GDP. The indicator recently marked new all-time highs, exceeding the 200% level in February 2021, a level that constituted "playing with fire" according to Warren Buffett.

History Rhymes

The current administration is moving swiftly because I think they know they have limited time to implement the changes they want. This suggests the inflation which took 7 years to build under LBJ could be cannonballed into just 12–18 months.
Larry Jeddeloh

The consistently buoyant situation on the financial markets in recent years could experience a lasting change in the weather as a longer-term inflationary phase takes hold. To support this thesis, let us look to the past. We know that history does not exactly repeat itself, yet we find it interesting that the 2020s show similarities to the 1960s in some socioeconomic terms.

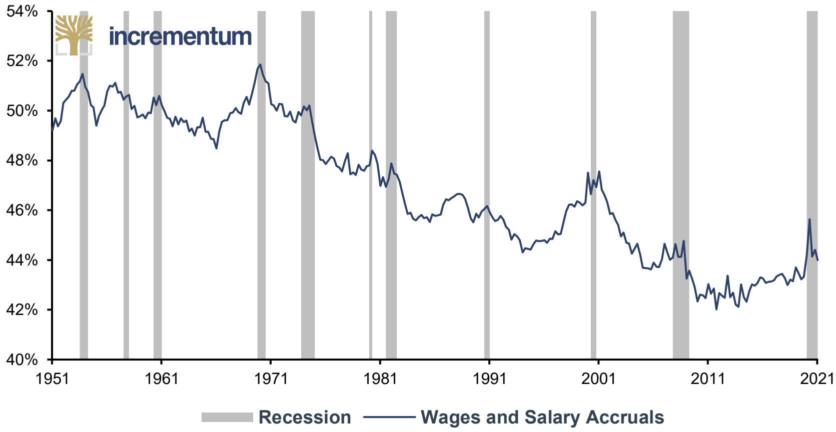
The period from 1963 to 1970 was marked in the USA by the so-called guns vs. butter[497] debate.[498] *Guns* referred to the financing of the Vietnam War, *butter* to President Lyndon B. Johnson's costly Great Society programs. In the end, there was no backsliding on either military or social policy issues. Prestige projects such as the space race also continued to strain the national budget. Fiscal policy consequently became much more expansionary; instead of "guns *or* butter", it was "guns *and* butter".

My laser focus is on one more thing: making sure working people in this country – hardworking people – are no longer left out in the cold. They're going to get a share in the benefits of a rising economy. It's been a long time since that happened. I've called my plan the "blue-collar blueprint for America," and that's exactly what it is. So, let's not let up.
Joe Biden

There was also an attempt to structurally strengthen workers' rights. The new policy favored unions over nonunionized workers. One result of all these measures was an increase in the CPI inflation index from 2% to 6% over a 7-year period.

There are also interesting parallels throughout among the actions of leaders. Just like President Biden, President Johnson was a former vice president. He believed that government intervention could improve people's lives. We find similar approaches today in Biden's American Families Plan and "American Jobs Plan. Unlike Biden, however, Johnson cut taxes. Still, the general thrust in the 1960s of a massive turnaround in government policy, to spend as much money as necessary to win the Vietnam War and to defeat poverty, can be seen equally in the second Covid-19 package of measures and income support for American families and workers, totaling over USD 4trn. Wages and salaries grew by about 32% during the 1960s, the fastest growth rate in the postwar era. President Biden is also placing a strong focus on increasing wages. This could have additional inflationary consequences over the years if a wage-price spiral develops.

Wages and Salary Accruals, in % of GDP, Q1/1951-Q1/2021



Source: Federal Reserve St. Louis, Incrementum AG

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497 *See* Wikipedia: Guns versus butter model
498 *See* Market Intelligence Report, Larry Jeddeloh, May 7, 2021

...the Woodstock generation was into free speech, whereas the Wokestock generation wants to cancel it, but there's the same sense of a generation war.
Niall Ferguson

Socially, the defining feature of the 1960s may have been the polarization of the nation. Currently, the US seems to be even more divided than it was back then. The increased potential for conflict became clear during Donald Trump's term in office. The division runs right across diverse social groups: conservatives versus progressives, the poor versus the rich, whites versus blacks, the Boomer generation versus Generation X, etc.

In the 1960s, the geopolitical focus was on a trial of strength with the supposedly rising Soviet Union. The consequence was a costly arms race and an expensive space race. The US may now be headed for a similar period of a new cold war, but this time with China as a rival, increasingly challenging the tottering hegemon.

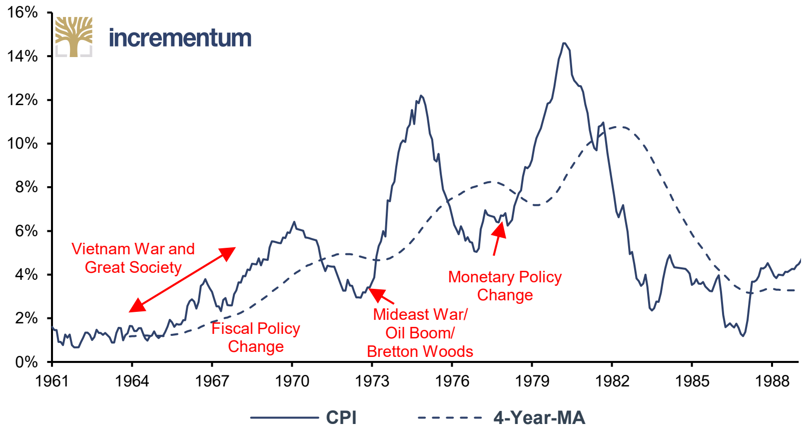
All these developments – along with monetary policy changes – were the foundation for the inflationary decade of the 1970s.

The Great Return of Inflation

In a world of ongoing pressure for policy makers across the globe to print and spend, zero interest rates, tectonic shifts in where global power lies, and conflict, gold has a unique role in protecting portfolios.
Bridgewater Associates

The likelihood of a sustained period of inflation will increase to the extent that the wage-price spiral begins to turn. Wage negotiations in the coming months and the rhetoric accompanying them will provide valuable information on how far monetary climate change has already progressed. It will also become clear how much governments are willing to adjust social benefits and pension payments in line with rising inflation, increases that in turn will make budget consolidation more difficult. This pattern was a major transmission element of price increases in the 1970s.

CPI, yoy%, 01/1961-01/1989



Source: Bloomberg, Reuters Eikon, Incrementum AG

Photo credit: commons.wikipedia.org

IIN instead of WIN?

We are still a long way from the overheated inflation climate of the 1970s. Price increases became a dominant sociopolitical issue as early as the mid-1970s. What *MAGA* – "Make America Great Again" – was for Donald Trump, the slogan *WIN* – "Whip Inflation Now" was for then US President Gerald Ford in response to the first wave of high inflation in 1974/75.[499] **Currently, we see exactly the opposite development: It seems as if *IIN* – "Increase Inflation Now" – is the credo of today's central bankers, economists and politicians.**

We have been registering this fundamental change for some time now. That is why we decided last fall to publish an *In Gold We Trust* special entitled "The Boy Who Cried Wolf".[500] In it, we point out how underestimated the risks of a significant pickup in inflation generally are. Many market participants are still unaware of how unpleasant the inflationary 1970s were, for equity investors as well as bond investors. It is therefore high time to take a close look at the risk to one's portfolio posed by inflation and financial repression.

In 2020, the Rubicon of macro policy regimes was definitively crossed.
Henry Maxey

A key indication that the financial world is ill-prepared for monetary climate change is the fact that there are almost no fund managers on duty today who have experienced an inflationary environment during their active investment careers. The bulk of investment managers could be caught on the wrong foot**. In addition, most portfolio strategies are based on back calculations that go back 10, 20, or at most 30 years.** However, very few portfolio strategies still consider the inflationary environment of the 1970s.

Monetary System in Burnout

We have been fragilizing the economy, our health, political life, education, almost everything (…) by suppressing randomness and volatility. Much of our modern, structured, world has been harming us with top-down policies and contraptions (…) which do precisely this: an insult to the antifragility of systems.
Nassim Taleb

Investors must always think in terms of impact chains and take opportunity costs into account. In his superb book *Antifragile: Things That Gain from Disorder,* Nassim Taleb describes how important the frequency of stressors, i.e. stress-causing internal and external stimuli, is. This is because people cope better with acute stress than with chronic continuous stress. This is especially true when acute stress is followed by a long phase of recovery. To understand how damaging even a low-threshold stress factor with a protracted recovery can be, just consider the so-called Chinese water torture: Drops of water are continuously dropped on the head of the victim, who is to be made docile by the continuous stress.

In our opinion, the financial and monetary system is now in a state of permanent stress, just short of burnout. This is also reflected in the fact that for years now, only *extraordinary* measures have been applied in monetary policy, after *ordinary* monetary policy no longer worked. Therefore, theories such as MMT have now finally entered the mainstream.

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499 "WIN" buttons immediately became objects of ridicule; skeptics wore the buttons upside down and explained that "NIM" stood for "No Immediate Miracles", "Nonstop Inflation Merry-go-round" or "Need Immediate Money". *See* Wikipedia: Whip inflation now
500 *See* "The Boy Who Cried Wolf – An Inflationary Decade Ahead?", *In Gold We Trust* special, November 30, 2020

Best of *In Gold We Trust* Report 2021

Other key findings from this year's *In Gold We Trust* report, "Monetary Climate Change", include the following:

- **Portfolio characteristics of gold:** Gold performs better when the yield curve is steepening than when it is flattening. This correlation reduces the likelihood that gold's interim disappointing performance in recent months was due to the rise in nominal interest rates. Our research also shows that the correlation between gold and gold mining stocks increases significantly during periods of falling real interest rates. The increased sensitivity between these assets signals that the market views both as safe havens against inflation. Instead of betting only on gold, investors could use both as inflation hedges.

- **De-dollarization:** In the reshaping of the global monetary order, China continues to work on all fronts to undermine the hegemony of the US dollar. In this struggle, China has opened another front, the digital front. While the digital yuan is already making its first real-world test runs, the euro zone is only in the early planning stages, while the Federal Reserve does not appear to be taking action on the digital central bank currency (CBDC) front. China could use the 2022 Winter Olympics in Beijing to put on a show of CBDC performance. These developments aside, central banks once again emerged as net gold buyers in 2020, albeit at lower levels. It is noteworthy that Hungary recently tripled its gold reserves and Poland announced a significant increase in gold reserves in the coming years.

- **ESG:** Mining companies have embraced the general precepts of ESG and are integrating its values into their business models. ESG has thus become an integral part of the corporate DNA in the mining sector. Investors also benefit as they gain assurance that their investments do not conflict with ESG concerns. What remains challenging is the fact that there is no single framework and that the now-numerous rating agencies take very different, and thus difficult to compare, approaches to ESG.

- **Mining stocks:** In 2020, gold producers recorded their most profitable year in history. The average spot gold price rose to USD 1,770/oz., but average industry AISC remained flat. While the gold price set new all-time highs last year, the valuation of gold mining companies does not yet reflect the sharp increase in profitability. Currently, gold mining stocks have the highest margins and lowest valuations of any S&P 500 sector. The potential returns for the next few years may surprise even the most hardened gold bugs. We are likely still in the early stages of the bull market, as mining stocks remain undervalued despite their 2020 performance.

- **Bitcoin & gold:** In our *In Gold We Trust* report 2019, we explained the advantages of a combined investment strategy consisting of gold and Bitcoin and presented theoretical portfolio developments.[501] Since we are convinced of this strategy, we have launched an investable fund strategy, whose realized

[501] *See* "Gold & Bitcoin: Stronger Together?", *In Gold We Trust* report 2019

results to date we presented and analyzed in this report. The investment results so far confirm our thesis that gold and Bitcoin are stronger together in a noninflationary hard money portfolio.

- **Silver:** Monetary climate change should boost silver. Contrary to the widespread belief that everything will be the same after the Covid-19 pandemic, we are convinced that after 40 years of a disinflationary climate we are witnessing a fundamental shift towards an inflationary climate. Therefore, investment demand for silver will be the most important price driver in the current decade. The so-called green turn will also be beneficial for silver, as silver is an important industrial metal in many future green technologies.

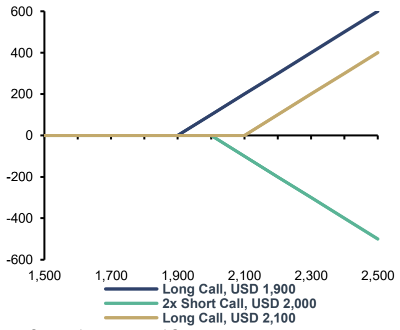
- **Technical analysis:** The Coppock indicator generated a long-term buy signal at the end of 2015, and now it seems that the cup-handle formation will soon resolve to the upside. The price target of this formation is USD 2,700.

What Gold Price Does the Options Market Expect?

An option is a means of achieving antifragility. This is asymmetry in its purest form.
Nassim Taleb

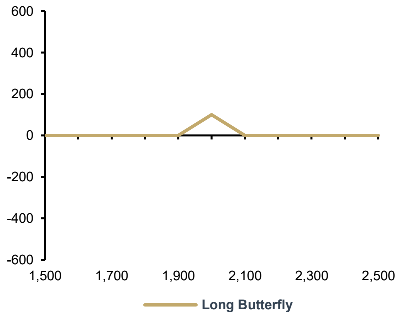
This year we would again like to venture an outlook on the future gold price. In contrast to last year's 10-year price forecasts, which we calculated by means of our proprietary gold price model[502], this year we focus on a much shorter forecast period. The following model attempts to determine a probability distribution of hypothetical returns based on implied expectations in the gold options market, using long butterflies[503] , schematically outlined in the following two charts, as the basis for calculation.

Long Butterfly Line-Up, Gold Price at Expiration (x-axis), and Gross payoff (y-axis)



Source: Incrementum AG

Long Butterfly, Gold Price at Expiration (x-axis), and Gross payoff (y-axis)



Source: Incrementum AG

This approach aims to calculate the fair price of the butterfly spread and repeat this process for all desired strike prices to generate a string of probabilities at different prices at the end. Due to the low liquidity of some gold December option contracts when using a 10-strike rhythm, we performed the calculation using a 50 strike rhythm.[504] Specifically, we use this to calculate the probabilities of certain scenarios occurring for the gold price in US dollars by the end of the year.[505]

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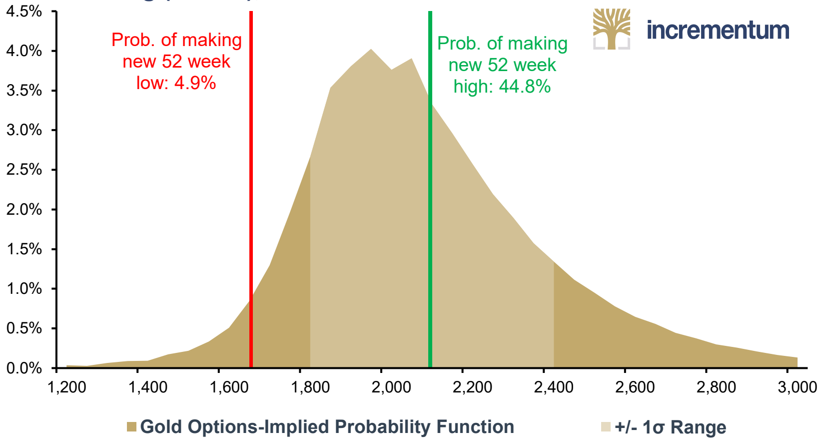
502 *See* "Quo vadis, aurum?", *In Gold We Trust* report 2020
503 Option strategy consisting of two short calls at a specific strike and one long call each with a symmetrical strike above or below it.
504 December gold options on the CME as of May 15, 2021
505 The underlying expiration month of the options with which the calculations were performed is therefore December 2021.

Consequently, we can derive the probability of the gold price reaching a new all-time high in December 2021.

…since the reality is when one buys life insurance, you don't win when you die.
Harley Bassman

The following chart shows the implied distribution density function of the gold options market. **This states that with a probability of almost 45% we will see a new 52-week high - USD 2,100 or higher - in December 2021 and thus also a new all-time high for the gold price at the same time.** The probability will see a new 52-week low (USD 1,650 or lower).[506]

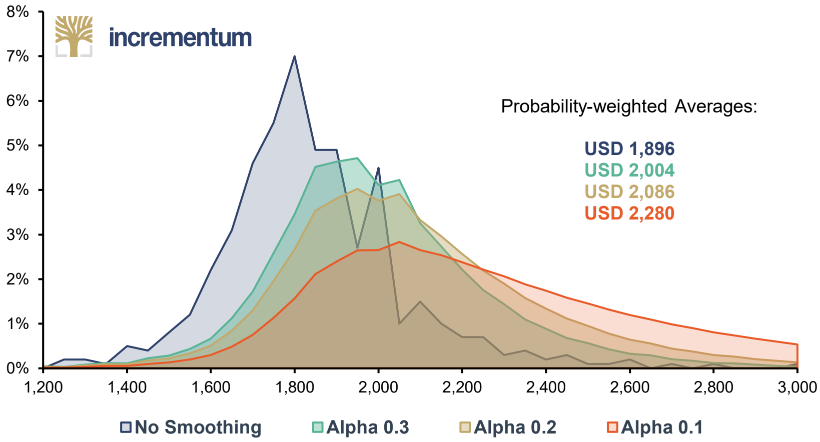
Gold Options-Implied Probability Function, Exponential Smoothing (α = 0.2), December 2021



Source: Reuters Eikon, Incrementum AG

The next chart shows all the collected distribution density functions with their probability-weighted gold prices for December 2021, oscillating between USD 1,896 and USD 2,280.[507]

Gold Options-Implied Probability Distribution Functions, December 2021



Source: Reuters Eikon, Incrementum AG

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506 Due to the 50 strike rhythm, the 52-week high and low have been adjusted to the nearest 50 digits. The exact 52-week high on a closing price basis is currently USD 2,063, while the 52-week low is USD 1,681.
507 It should be noted that the distribution varies slightly to moderately depending on the degree of exponential smoothing. In practice, a smoothing constant α of 0.1-0.3 is applied, since with a higher constant the desired smoothing is not achieved, and with a lower constant the exponential factor distorts the distribution function too much. Due to this, we decided to perform and publish the calculation of the distribution density function with all relevant expression options, i.e. without smoothing as well as with smoothing using α = 0.1, α = 0.2, and α = 0.3, to achieve the most informative and transparent results possible.

The chart further shows that especially the strikes at USD 1,950 and USD 2,050 deviate from the overall distribution, likely because of the illiquidity of these options contracts. This reinforces the use of exponential smoothing of the distribution density function, which more realistically represents true market expectations.

Of course, this is only a snapshot. We are aware that expectations on the financial markets are generally not rigid. Nevertheless, the information content that can be derived from this analysis can be classified as quite high and roughly in line with our expectation for gold price development for the current calendar year.

Quo vadis, aurum?

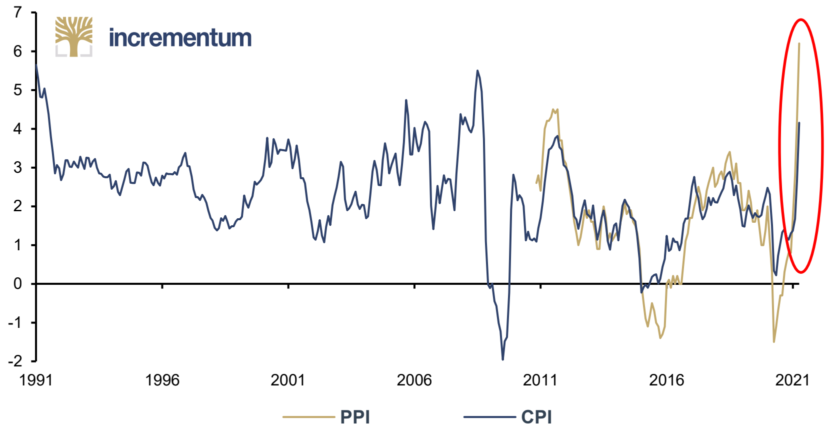
We are all agreed that your theory is crazy. The question that divides us is whether it is crazy enough to have a chance of being correct.
Niels Bohr

Last year, our assessment was that a golden decade had begun for precious metals investors. In a conservative scenario, we had set a price target of USD 4,800 for the end of the decade. If the decade was plagued by stronger inflation, a price of USD 8,900 could be expected at the end of the decade. **With the monetary climate change that we are witnessing this year, the risk of inflation is growing visibly.**

I can't find any period in history where monetary and fiscal policy were this out of step with the economic circumstances, not one.
Stanley Druckenmiller

Admittedly, it is still too early in 2021 to say with any certainty how pronounced or how long the inflationary phase will affect everyday life. Nevertheless, we remain true to our 10-year forecast. From today's perspective, the probability of a gold price at the upper end of the range has increased significantly. This has been impressively confirmed by the latest inflation figures in the US. Both consumer prices and producer prices have been significantly higher than expected this year.

CPI and PPI, yoy%, 01/1991-04/2021



Source: Reuters Eikon, Incrementum AG

Courtesy of Hedgeye

Many market participants do not yet recognize the monetary climate change. In recent months, markets have consistently reacted to higher-than-expected inflation figures with rising yields and falling gold prices in the short term. This reflects the expectation that inflation will be effectively fought by central banks and will remain a temporary phenomenon. As we have explained in detail, we disagree.

You must only be patient. Because on your side you have reason (…) and against you, you have just a vague, fat, blind inertia.
Ayn Rand

Conversely, it is therefore difficult to imagine that we are currently at the end of a gold bull market. When we compare various macro and market metrics at the time of the last secular all-time highs in 1980 and 2011 with the current situation, the gold price still appears cheap in relative terms.

Macro and market metrics at all-time highs of gold: 1980, 2011, current

	1980	2011	Current
Gold price in USD	850	1,900	1,880
Monetary base in USDbn	155	2,637	5,839
M3 money supply in USDbn	1,480	9,539	19,896
US government debt in USDbn	863	14,790	27,748
GDP/capita	30,154	50,660	66,611
S&P 500	110	1,165	4,150
US unemployment rate	6%	9%	6.1%
US dollar Index	86	78	90

Source: Federal Reserve St. Louis, Reuters Eikon, Incrementum AG, as of 05/20/2021

Despite an environment that should, by and large, clearly favor gold, the price of gold today is at about the same level as it was 10 years ago and is therefore, in our view, favorably valued. Ray Dalio, one of the most successful fund managers of all time, has recently commented several times on inflation and the merits of investing in gold. **We would like to close with this thought of Ray Dalio, which also explains our motivation for publishing such a "tome":**

> *"I believe that the reason people typically miss the big moments of evolution coming at them in life is that we each experience only tiny pieces of what's happening. We are like ants preoccupied with our jobs of carrying crumbs in our minuscule lifetimes instead of having a broader perspective of the big-picture patterns and cycles, the important interrelated things driving them, and where we are within the cycles and what's likely to transpire."*[508]

You don't need to fear anything in life, you just need to understand it. Now is the time to understand more so that we fear less.
Marie Curie

The stability of the value of money is always a measure of confidence in the economic future and the credibility of institutions. As we explained in this year's *In Gold We Trust* report, fundamental economic upheavals have often led to currency crises and even currency reforms. Historical developments never repeat themselves congruently, but they usually show striking similarities in terms of their causes and their sequences.[509] However, one must also be able to recognize and interpret these signs of the times.

Prepare for the worst; expect the best; and take what comes.
Oscar Wilde

For investors, the coming years will undoubtedly be challenging. We look forward to continuing to analyze what is happening for you and to sharing our thoughts with you. Together, we will overcome these challenges. Because for us, today more than ever in this time of profound monetary climate change:

IN GOLD WE TRUST

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[508] *See* Dalio, Ray: "The Changing World Order", LinkedIn, March 25, 2020
[509] *See* "3. Währungen und Werte" ("3. Currencies and Values"), *Studienreihe*, Donner & Reuschel, February 24, 2021

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 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* (the Vienna Stock Exchange Academy). In 2014, he co-authored the international bestseller *Austrian School for Investors*, and in 2019 *The Zero Interest Trap*. He is a member of the board of directors at *Tudor Gold Corp*. (TUD), a significant explorer in British Columbia's Golden Triangle as well as a member of the advisory board of *Affinity Metals* (AFF). Moreover, he is an advisor to *Matterhorn Asset Management*, a global leader in wealth preservation in the form of physical gold stored outside the banking system.

Mark J. Valek, CAIA

Mark is a partner of Incrementum AG and responsible for Portfolio Management and Research.

While working full-time, Mark studied business administration at the Vienna University of Business Administration and has continuously worked in financial markets and asset management since 1999. Prior to the establishment of Incrementum AG, he was with Raiffeisen Capital Management for ten years, most recently as fund manager in the area of inflation protection and alternative investments. He gained entrepreneurial experience as co-founder of *philoro Edelmetalle GmbH*.

Since 2013 he has held the position as reader at *scholarium* in Vienna, and he also speaks at *Wiener Börse Akademie* (the Vienna Stock Exchange Academy). In 2014, he co-authored the book *Austrian School for Investors*.

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Incrementum AG is a boutique investment and asset management company based in Liechtenstein. Independence and self-reliance are the cornerstones of our philosophy, which is why the five partners own 100% of the company.

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.

https://www.incrementum.li/en

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www.hecla-mining.com

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