In Gold We Trust®
Report

May 24, 2023

Showdown

incrementum

Ronald-Peter Stöferle
& Mark J. Valek

In Gold We Trust Report

We would like to express our gratitude to our Premium Partners for supporting the *In Gold We Trust* report 2023

Details about our Premium Partners can be found on page 413 ff.

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Introduction

The balancing act of fighting inflation without triggering distortions on the markets is doomed to failure. The vehemence of the tightening cycle that has begun threatens to end the Everything Bubble in an Everything Crash.

***In Gold We Trust* report 2022**

- **It's a showdown foregone. For as we predicted in the two *In Gold We Trust* reports "Monetary Climate Change" and "Stagflation 2.0", it was only a matter of time before the consequences of years of zero and low, sometimes even negative, interest rates, come to light.**
- **The persistent underestimation of inflation dynamics ultimately forced central banks to sharply and quickly raise interest rates.**
- **Tight monetary policy has initiated a painful unraveling of various misallocations that formed during the low-interest-rate environment that lasted for more than a decade.**
- **The recession we anticipate will force a monetary policy showdown against the backdrop of inflation rates that remain too high.**
- **A geopolitical showdown is brewing between the West and several emerging economies. The US dollar-centric global monetary system is coming under increasing pressure.**
- **The gold price already anticipates that the restrictive US monetary policy will turn out to be a bluff. Even if the gold price in US dollars has not yet marked a new all-time high, the all-time highs in various other currencies are a harbinger for a breakout in US dollars.**

We live in the most interesting of times.
Elon Musk

We live in a time when events unfold at an ever-accelerating pace. The quote erroneously attributed to Lenin, "*There are decades in which nothing happens, and weeks in which decades happen*", now seems to be our reality. Certainties of decades past are being made obsolete overnight. As we follow the news, many of us experience uncertainty, trepidation, and overwhelm. The global pandemic, the inflation crisis, increasing political polarization, technological breakthroughs such as artificial intelligence – which, by the way, we used to create the cover of this *In Gold We Trust* report – but also the impending geopolitical realignment are changing our lives in ways that were unimaginable to many of us just a few years ago.

It's been a long
A long time coming, but I know
A change gon' come
Oh yes, it will.
Sam Cooke

We have referred to these looming epochal changes many times in past *In Gold We Trust* reports. We chose titles such as "Gold in the Age of Eroding Trust" (2019) and "Monetary Climate Change" (2021) for good reason. And this year, too, calls for a pointed title that captures the complexity of the current situation. We're going with ***Showdown*.**

If you search the dictionary for the meaning of *showdown*, you will get the following definition:

1. *"the laying down of one's cards, face upward, in a card game, especially poker.*
2. *a conclusive settlement of an issue, difference, etc., in which all resources, power, or the like, are used; decisive confrontation."*

In our opinion, the term *showdown* is an apt description of the current situation, in which economic, political and social developments are on the brink of a fundamental change of course.

The key to No-Limit Poker is to put a man to a decision for all his chips.
Doyle Brunson

The current situation is also unique because we are not dealing with a singular showdown. Multiple escalations are occurring simultaneously and have the potential to further inflame each other. These showdowns are all related to issues we have already analyzed in detail in previous years in our *In Gold We Trust* report:

- **the monetary policy showdown**
- **the geopolitical showdown and the associated de-dollarization**
- **the showdown in the gold price**

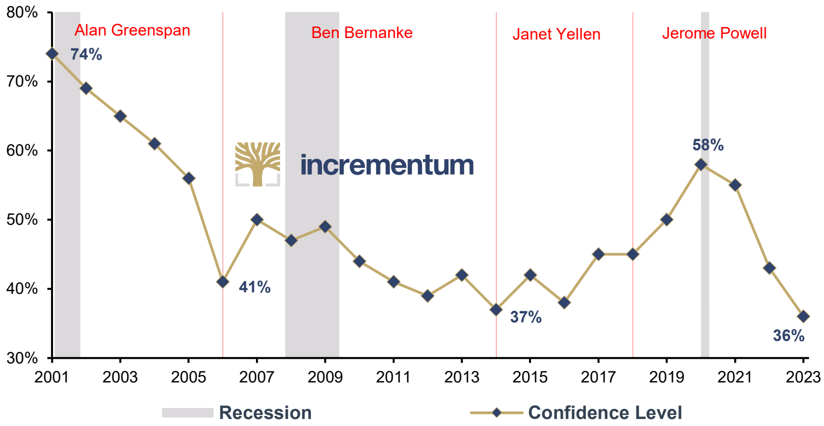
The Monetary Policy Showdown

The characterization of inflation as transitory is probably the worst inflation call in the history of the Federal Reserve, and it results in a high probability of a policy mistake.
Mohamed El-Erian

It's a showdown foregone. For as we predicted in the two *In Gold We Trust* reports "Monetary Climate Change" and "Stagflation 2.0", it was only a matter of time before the consequences of years of zero and low, sometimes even negative, interest rates, come to light. Actions have consequences – expected consequences, that is.

However, central bankers had trotted out appeasement rhetoric even at inflation rates well beyond their 2% inflation target. Jerome Powell's insistence that inflation was merely *transitory* is now as legendary as Christine Lagarde's belittling description of the inflation surge as a *hump*. **Not surprisingly, confidence in central banking is in a steep decline.**

Confidence Level in the Fed Chair*, 2001-2023



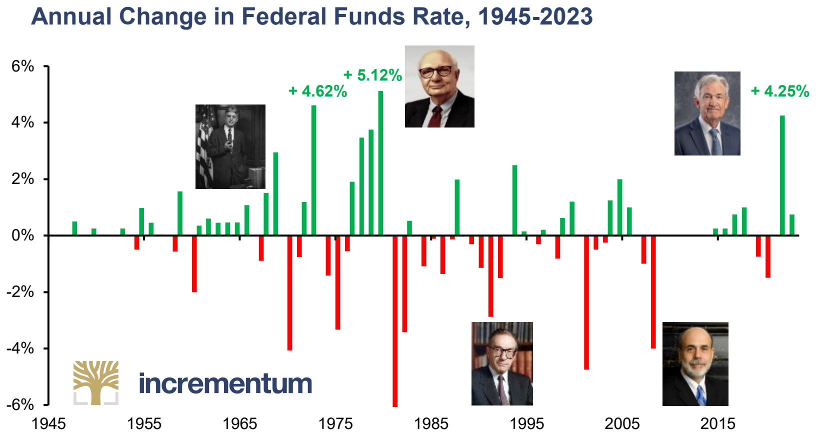
Source: Gallup, Incrementum AG
*Percentage of people who have a "great deal" or "fair amount" of confidence in the Federal Reserve chairman.

We're in the early innings of the next financial crisis.
Mark Jeftovic

This negligence resulted in an emergency monetary policy brake. **With the economic slowdown now underway and inflation rates still clearly too high, the monetary policy trilemma – price stability vs. financial market stability vs. economic support – that we warned about is now a reality.**

Our economic forecasting record is nearly perfect.
Janet Yellen

When central bankers finally recognized the severity of the situation, however, they acted with unexpected rigor. Jerome Powell raised interest rates twice as much in less than a third the time that Janet Yellen took in the last hiking cycle. **His vehemence surprised us, as it probably did every other analyst, market strategist, fund manager – and astrologer. But it's true: If you hit the brakes too late, you have to hit harder!**



Source: Reuters Eikon, Incrementum AG

The only function of economic forecasting is to make astrology look respectable.
John Kenneth Galbraith

Despite the radical tightening of monetary policy, inflation is proving to be extremely stubborn. Until recently, the Federal Reserve had signaled that it was prepared to do everything in its power to get inflation back under control. After a decade and a half of a flood of liquidity and ultra-low interest rates, withdrawal symptoms are now increasingly appearing after the abrupt removal of the punchbowl. It is becoming apparent which business models have been supported only by low interest rates in recent years and which are fundamentally standing on their own two feet.

My goal is to have impact.
Sam Bankman-Fried

The strongest and fastest interest rate hikes in the industrialized nations in over 40 years have already claimed their first victims. The pension fund debacle in the UK, the closure of the Blackstone Real Estate Income Trust, various calamities in the crypto sector, – above all the spectacular FTX bankruptcy – are just a few examples of the consequences of the abrupt interest rate turnaround.

You can't run the most reckless monetary and fiscal experiment in history without the bill eventually coming due. The first bill arrived as inflation. The second has come as a financial panic, with economic damage that may not end with SVB.
Jesse Felder

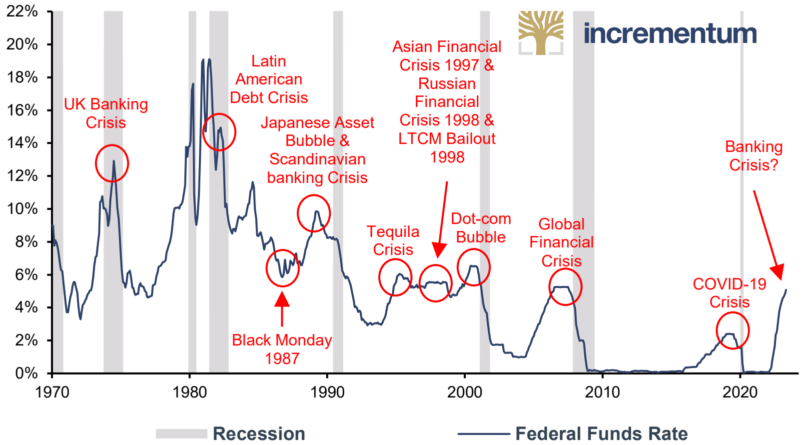
In March, another economic problem front opened up when Silicon Valley Bank (SVB) collapsed without warning, followed shortly by Signature Bank. In early May, another regional bank, First Republic, followed suit. We believe it would be too simplistic to blame the regional bank collapse solely on poor management or on their exposure to the stumbling technology sector, which is known to be highly interest rate sensitive.

Three of the four largest US bank failures in history took place in the past few weeks; only the collapse of Washington Mutual in September 2008 caused significantly higher losses, both in nominal and real terms. All in all, more than USD 500bn has already had to be written off since the beginning of March. This is a clear warning signal that the financial system is much more fragile than generally assumed. **And on this side of the Atlantic, too, a major bank has already had to pull up stakes, and with the venerable Credit Suisse, it is not just any bank that has been hit.** In mid-March, the bank was sold off to UBS in a smoke-and-mirrors operation.

Image credit: The Economist

Undeterred, **the mainstream continues to hail** the resilience of the US economy and downplay the problems. However, for all those familiar with the Austrian Business Cycle Theory pioneered by Ludwig von Mises and Friedrich August von Hayek, it is no surprise that the radical turnaround in interest rates is causing acute pain. **Financial history is full of precedents where flooding the markets with liquidity triggers an artificial boom.**

Federal Funds Rate, 01/1970-05/2023



Source: Reuters Eikon, Incrementum AG

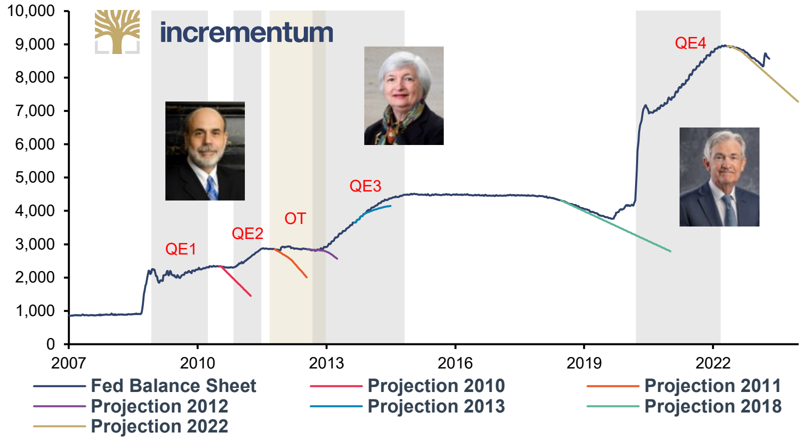
Nothing sedates rationality like large doses of effortless money.
Warren Buffett

When the artificial stimuli are withdrawn, the misallocations are ruthlessly exposed and then cleaned up by painful price collapses, insolvencies, and recessions. "*Only when the tide goes out do you discover who's been swimming naked,"* is how Warren Buffett so aptly described this phenomenon. And there is much to suggest that many more swimmers will turn out to be nudists. In this context, we particularly recommend our chapter on the crack-up boom in this *In Gold We Trust* report to interested readers.

The same old Fed. Overeases. Then it overtightens.... Fed tightening cycles have a history of leading to recessions 80% of the time.
Dave Rosenberg

In addition to interest rate hikes, a key component of current policy is quantitative tightening, i.e. the reduction of the central bank's balance sheet. According to schedule, the Federal Reserve's balance sheet is currently being reduced by USD 95bn per month, which corresponds to a reduction of 12% p.a. in total assets. However, this schedule already had to be deviated from at short notice in connection with the bank failures in March, and the balance sheet total had to be inflated again by USD 400bn.

Fed Balance Sheet Path, in USD bn, 01/2007-01/2024e



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

The Fed since Volcker has been pretty clueless and remains so. What has been more remarkable, though, is the persistent confidence shown toward all of these four Fed bosses despite the demonstrable ineptness in dealing with asset bubbles.
Jeremy Grantham

Subsequently, there was heated debate in financial market circles as to whether this rescue measure should be classified as a reversion to quantitative easing. In our opinion, this terminological hair-splitting distracts from the much more important point: When systemic problems arise, central banks ultimately have only one remedy, and that is to provide additional liquidity. Every attempt over the past 15 years to reduce the central bank balance sheet has usually failed miserably after only a few quarters.

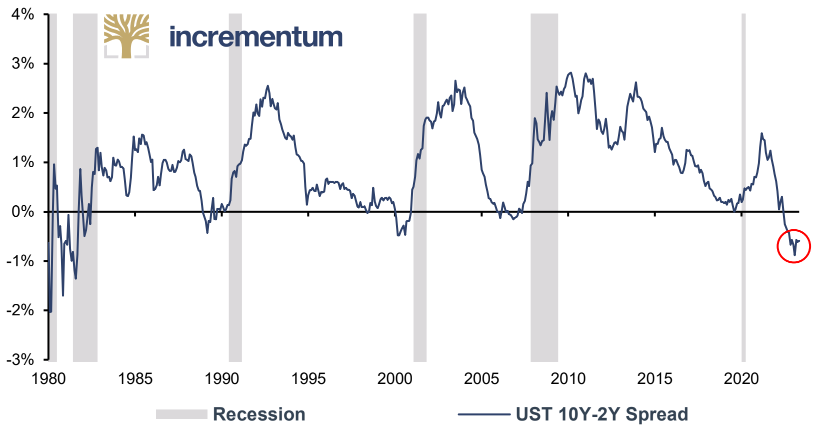
Against this backdrop, the monetary policy showdown between price stability, economic activity, and financial market stability is now looming. The all-important question is: Can the Federal Reserve continue its restrictive monetary policy and push inflation back down to 2% without triggering a severe recession or a new financial crisis, or will it have to rescue the system once more with expansive stimulative measures and thus risk another wave of inflation? **The cards must be laid on the table, at the latest, when the pain at the banks, on the capital markets, or in the real economy becomes too great.**

Negative money supply growth is unchartered territory

I'm in the "hard landing" camp.
Stanley Druckenmiller

And the signs of an imminent recession in the USA are growing stronger. The strongly inverted yield curve, a slowly weakening labor market, the Conference Board Leading Economic Index (LEI) – all these leave little room for economic optimism. **For a more in-depth analysis of the state of the US economy, see chapter 3, "The Monetary Policy Showdown".**

UST 10Y-2Y Spread, 01/1980-05/2023



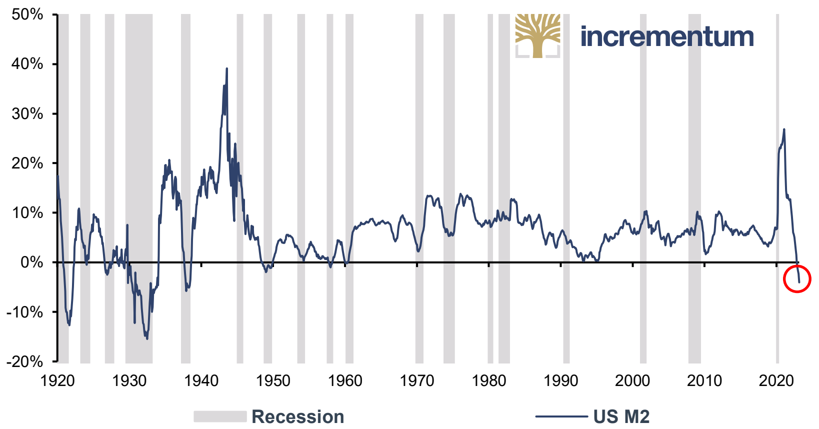
Source: Reuters Eikon, Incrementum AG

When velocity turns down, monetary policy will have very little capability to stimulate economic activity. The well-known "pushing on a string" predicament will be totally insufficient to describe the situation that lies ahead.
Lacy Hunt

Moreover, money supply growth in the US, calculated on a monthly basis, is negative for the first time since the 1950s, and on an annual basis for the first time since the Great Depression. As the proponents of the Austrian Business Cycle Theory point out, the flattening of money supply growth is already enough to end the artificially created boom and the bubbles on the markets. A declining money and credit supply is a sure sign of profound economic dislocation. Based on their empirical research, our friends at *Longview Economics* outline the consequences of such a contraction in the money supply:

> *"Historically, whenever US M2 money supply has contracted on an annual basis, there's been a banking crisis, a depression and/or deflation. Whilst all those prior occurrences happened prior to WWII, and since then 'deposit insurance' has been introduced (1933) and the Fed has become an active 'lender of last resort', it's also the case that M2 money supply hasn't been contracted since the Great Depression. In that sense the current framework is untested."*[1]

US M2, yoy, 01/1920-03/2023



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

[1] Longview Economics, "A Year of Shrinking Deposits – Now What? a.k.a. Banking Crisis Round Two," March 22, 2023

Bluff is a nice word for lying. The cards are going to even out in the end. In poker, the one who lies the best wins.
Chris Anderson

Although recessions but also capital market slumps have a disinflationary and sometimes even deflationary effect, the response will be highly inflationary: QE, YCC, and interest rate cuts. **What is certain in these uncertain times is that the longer and deeper the financial markets fall, the more stimulative, aggressive and desperate the monetary and fiscal policy responses will be, ultimately laying the foundation for another, higher wave of inflation.**

Courtesy of Hedgeye

For us, one thing is certain: The *soft landing* much invoked by the Federal Reserve seems to become less likely by the day. **The coming showdown will reveal whether the Federal Reserve is actually holding the strong hand it claims to be holding, or whether it will be *called* by the market and its strategy exposed as a bluff.**

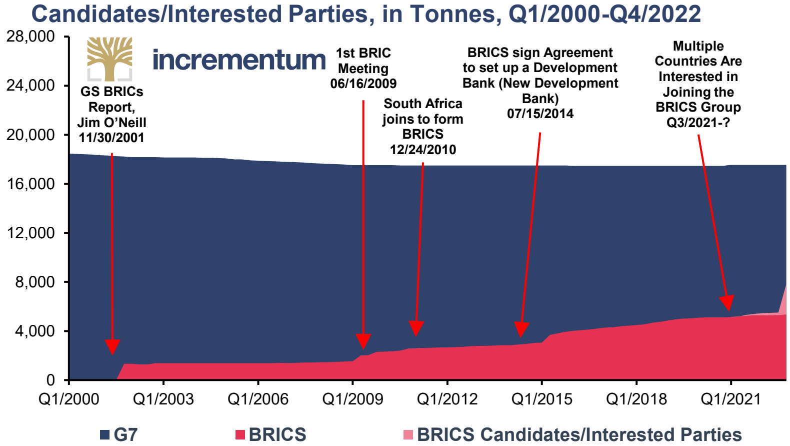
The Geopolitical Showdown

We are witnessing the birth of Bretton Woods III – a new world (monetary) order centered around commodity-based currencies in the East that will likely weaken the Eurodollar system and also contribute to inflationary forces in the West.
Zoltan Pozsar

In geopolitics, we are also approaching a gripping showdown. Relations between the world's political power centers are increasingly strained, and there is a showdown between the saturated *establishment* and the hungry *upstarts*.

At the forefront are the *collective West* under the leadership of the US, on the one side, and China, Russia and the bloc forming around these two heavyweights on the other. A considerable number of emerging economies associate themselves with the latter, some formally through organizations that challenge the US-centric world order. A central example of such an association is the BRICS states, which 19 other states from Asia, Africa and South America want to join. **And it is precisely these states that have been increasingly building up gold reserves and reducing US dollar reserves since 2008**.

Global Gold Reserves, G7 and BRICS + BRICS Candidates/Interested Parties, in Tonnes, Q1/2000-Q4/2022



Source: World Gold Council, Incrementum AG

World War III has already started, but it's different from "traditional" world wars: it is a hot war in cold place and a cold war in hot places.
Pippa Malmgren

This trend has accelerated again as a result of the sanctions against Russia, as we projected in the *In Gold We Trust* report 2022. The emerging-market countries have taken careful note of the *militarization of money* and are now trying to reduce their dependence on the US dollar. One of the few neutral and liquid reserve currencies in this political environment remains gold. The accumulation of the precious metal as an alternative is now being discussed by highly official circles. Christine Lagarde recently noted, "*We are also seeing increased accumulation of gold as an alternative reserve asset, possibly driven by countries with closer geopolitical ties to China and Russia*."

Image credit: Wikimedia

Similarly, efforts to reduce the role of the US dollar as a trading currency are increasing. China, for example, made virtually no use of the yuan for foreign trade transactions in 2010. By contrast, at the end of March, for the first time, China conducted more sales in the yuan than in the US dollar, which was still responsible for 83% of China's foreign trade in 2010. **There are also increasing efforts to develop alternative trade currencies and payment systems.** As early as March 2022, Zoltan Pozsar had initiated this debate in a stimulating way with his article *Bretton Woods III*. He concluded his remarks with the following forecast: "*From the Bretton Woods era backed by gold bullion, to Bretton Woods II backed by inside money (Treasuries with unhedgeable confiscation risks), to Bretton Woods III backed by outside money (gold bullion and other commodities)*". Where exactly this journey will lead us, nobody knows at the moment. However, there is no question that we are irrevocably on the journey to a new global (monetary) order.

This kingdom is not the kingdom it was five years ago, it's not the kingdom it was 10 years ago. So, every piece of analysis that existed is no longer relevant.
Princess Reema bint Bandar Al Saud, Saudi Ambassador to the USA

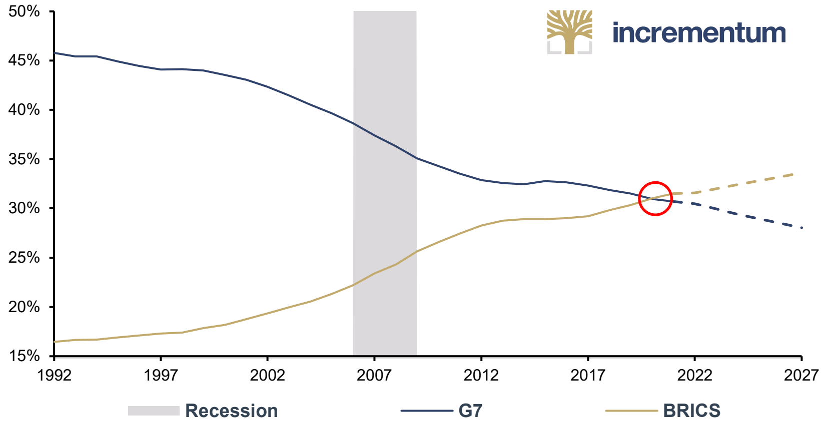
The historic rapprochement between Iran and Saudi Arabia, which China played a leading role in mediating, should also be mentioned in this context. In the course of this diplomatic masterstroke, new trade agreements were concluded for oil and gas deliveries, which are settled in yuan. These and other developments significantly undermine the *petrodollar system* institutionalized between the US and Saudi Arabia half a century ago. **This year, we again take an in-depth look at this issue, both in our traditional de-dollarization chapter and in an interview with star analyst Zoltan Pozsar.**[2]

The truest reason I see is the growth of Athens, which forced the frightened Spartans to go to war.
Thucydides

The growing political self-confidence of the BRICS countries is a logical consequence of their increasing economic importance. Measured in purchasing power parity, these countries have had a higher aggregate GDP than the G7 countries since 2021. With the exception of China, the demographic situation also argues for significantly higher long-term growth potential in the BRICS countries than in the West.

[2] The short version of our interview with Zoltan Pozsar is part of this *In Gold We Trust* report, *see* "Exclusive Interview with Zoltan Pozsar: Adapting to the New World Order". The long version is available here.

Share of Global GDP (PPP), G7 and BRICS, 1992–2027e



Source: Acorn MC Ltd, World Economic Outlook, Reuters Eikon, Incrementum AG

The United States and China are on the brink of war and are beyond the ability to talk.
Ray Dalio

Given these dynamics, it is fair to ask to what extent we are in the Thucydides Trap today. This theory states that the rise of an emerging power leads to conflicts with the established world power. The term goes back to the Greek historian Thucydides. He noted that the rise of Athens in the 5th century B.C. would inevitably lead to tensions with Sparta and ultimately to war between the two powers for supremacy, for the position of hegemon. At worst, China's growing strength and the resulting shift in the global power structure could lead to a warlike confrontation between the US and China-and their respective allies – as it did back then between the Attic Sea League led by Athens and the Peloponnesian League led by Sparta. **The Thucydides Trap should be a warning to political elites to try everything possible to avoid war and keep the peace.**

The irony of the ESG agenda, therefore, is that it has curtailed capex in the commodity sector as the capex in all other sectors is booming due to a slew of reasons… The lack of logic in this situation is the greatest reason to be long commodities the rest of this decade.
Marko Papic

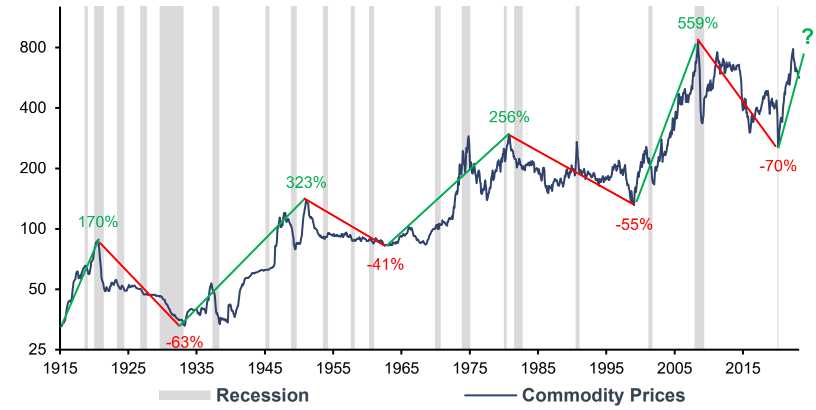
A showdown is also looming in the area of raw materials. Resource nationalism is gaining momentum. Chile, which has the world's largest lithium reserves, announced it would nationalize SQM and Albemarle, two companies involved in lithium production. Indonesia has imposed export bans on nickel and tin so as not to jeopardize the development of domestic production of batteries. Our dear friend Alexander Stahel aptly noted recently,[3] that the prevailing view among policymakers that supply curves are elastic has been disproved by the pandemic, the energy transition and geopolitics. This represents a massive shift in the global investment environment. **Global commodity supply curves may now be nearly vertical – a recipe for medium-term stagflation**.

Aggregate supply curves may now be near vertical – a recipe for stagflation over the medium term. This also suggests that the world will switch from one of cooperation and collusion to one of competition.
Alexander Stahel

The consequences? Both *fossilflation*, after the supplies of natural gas, oil, and coal decrease in succession, and *greenflation*, meaning higher metal and mineral prices due to increased demand for green commodities. Energy innovations will eventually help make energy cleaner, cheaper, and more abundant worldwide. But such breakthroughs will require many trillions in investment or an *energy miracle* such as fusion technology. The commodity supercycle, which we have regularly highlighted in recent years, is clearly intact in our view and could gain significant momentum once the current correction phase is over.

[3] Burggraben Investment Letter, February 2023

Commodity Prices*, 01/1915-04/2023



Source: Alpine Macro, Federal Reserve St. Louis, Reuters Eikon, Incrementum AG
*1913-1934 US PPI Industrial Commodities, 1935-1949 Spot Price 28 Commodities, 1950-1969 Spot Price 22 Commodities, since 1970 S&P GSCI

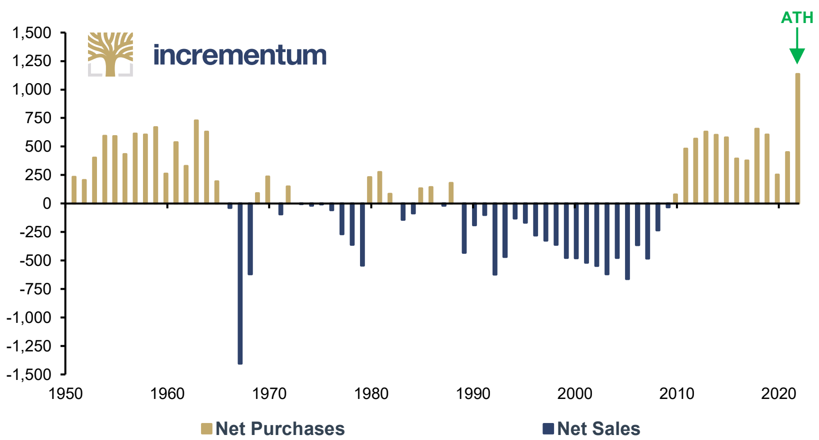
The Showdown in the Gold Price

This leads us to the central topic of our *In Gold We Trust* report, the showdown in the gold price. We are convinced that the monetary and geopolitical situation as well as the chart development of the gold price suggest that a showdown in gold is imminent.

Harmony is built on trust, and occasional disagreements can only be resolved peacefully provided there is trust. But when trust is gone, everything is gone.
Zoltan Pozsar

Central banks have been net buyers of gold since 2009. This momentum has accelerated significantly again in the past year. **In 2022, central banks increased their purchases by 152%, to over 1,136 tons.** Foreign exchange reserves, on the other hand, fell by a record USD 950bn. Asian central banks again made the bulk of gold purchases. For the first time in many years, China also made an official appearance as a buyer. It is noteworthy that with Qatar, Iraq, and the United Arab Emirates, three major energy exporters are now among the top ten gold buyers. **We expect that central bank demand will become a key driver of this gold bull market.**

Global Central Bank Gold Purchases, in Tonnes, 1950-2022

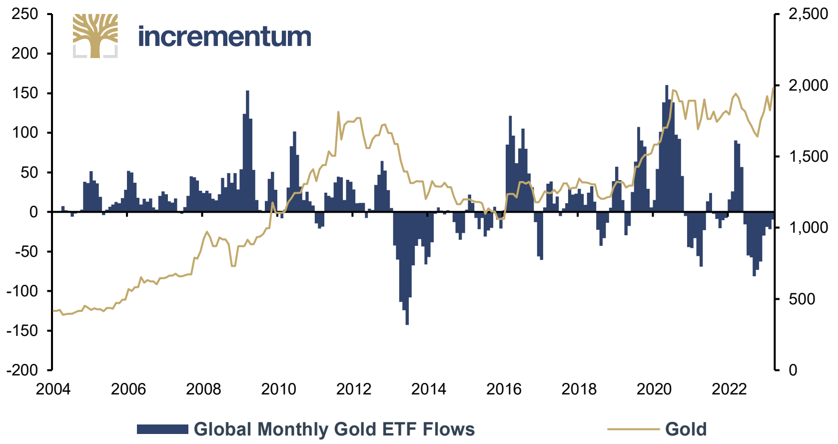


Source: World Gold Council, Incrementum AG

If Dr. Copper has a PhD in economics, and is an expert on the business cycle, then gold is a professor with a Nobel Prize in monetary debasement.
Charlie Morris

Not only central banks but also investors will be looking to protect themselves from stubborn inflation, a possible recession, and increasing default risks in the financial system. Currently, however, investor demand remains subdued. Although gold ETFs saw inflows again in March as a result of the banking crisis, this was after 10 straight months of outflows. In our view, the bulk of Western financial investors, for whose behavior ETF flows are a good indicator, remain on the sidelines. We expect that at new all-time highs, *FOMO* will kick in and new players will then enter the field in a flash. **Investment demand from gold ETFs could tip the gold price scales.**

Global Monthly Gold ETF Flows (3 Month Average) (lhs), in Tonnes, and Gold (rhs), in USD, 01/2004-03/2023

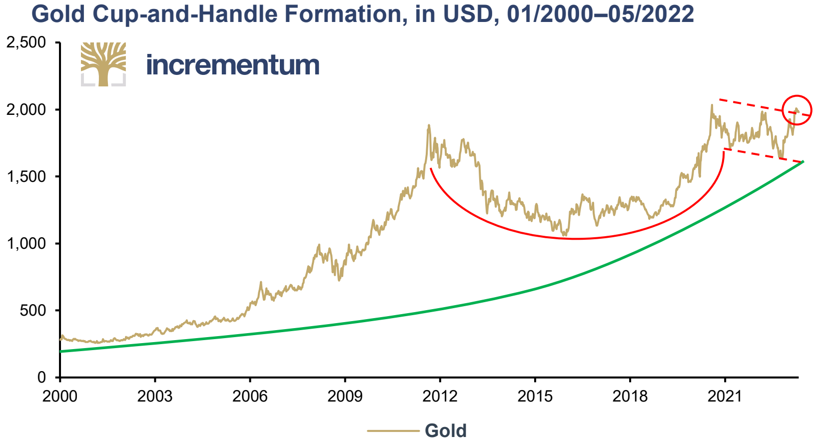


Source: World Gold Council, Incrementum AG

Time is more important than price. When time is up price will reverse.
W. D. Gann

The gold price already seems to anticipate that the restrictive US monetary policy will turn out to be a bluff. Even if the gold price in US dollars has not yet marked a new all-time high, the all-time highs in various other currencies are a harbinger for a breakout in US dollars.

Gold Cup-and-Handle Formation, in USD, 01/2000–05/2022



Source: Reuters Eikon, Incrementum AG

Other Highlights from this Year's *In Gold We Trust* report:

- An in-depth analysis of the state of the US economy, including the presentation of our *Incrementum Recession Phase Model*. This model is designed to guide investors in their investment decisions during the five different recession phases.
- An exclusive interview with star analyst Zoltan Pozsar on the opportunities and risks of a reorganization of the monetary world order (*Bretton Woods III*).
- A detailed discussion of the process of de-dollarization and the specific initiatives to reduce dependence on the US dollar.
- An exclusive interview with Russell Napier on inflation, financial repression, and the capex cycle.
- An in-depth look at the flow of gold from West to East and the Chinese gold market in particular.
- A suggestion for goodwill to end the squabbles in the sound money camp between supporters of gold and those who favor Bitcoin.
- Background articles on various topics such as the crack-up boom phenomenon, the Chinese silver standard, and a proprietary bull market indicator.
- A detailed chapter on silver and its portfolio characteristics.
- A look at the capex issues in the mining sector and the technical analysis of the gold price.
- In the last chapter, as every year, we ask ourselves the question "Quo vadis, aurum?" and present an update of our gold price forecast.

Thank you very much!

Year after year, the *In Gold We Trust* report strives to be the world's most recognized, widely read, and most comprehensive analysis on gold.

Thinking, good thinking that is, is a lonely sport. This may explain why so many of us do it so poorly.
Arthur Zeikel

Every year we retire to our bower for a few weeks to do research; sort thoughts, data and facts; reflect; and finally write the *In Gold We Trust* report. After all, we want to offer you not only a comprehensive analysis of current developments but also historical, philosophical, and economic-theoretical insights around the topic of gold. In doing so, you, dear readers, are our greatest incentive. It is our pleasure to bring you closer to the always fascinating world of gold in an informative, entertaining, and understandable way. **We thank you for your interest and the trust you place in our analyses.**

This is the 11th time that this annual publication is being published under the umbrella of Incrementum AG. We would like to take this opportunity to thank our Incrementum AG partners, who regularly assist us as experienced and well-read sparring mates in matters of market analysis, company valuation, and fund management. We would also like to take this opportunity to thank Erste Group, the publisher of the first editions of the report. Without the support of Erste Group, the *In Gold We Trust* report would probably not have come into being in its current form.

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

We would also like to thank our more than 20 fantastic colleagues on four continents and in countless time zones [4] for their energetic and tireless efforts over more than 20,000 hours.

Last but not least, special thanks go to our Premium Partners.[5] Without their support, it would not be possible to make the *In Gold We Trust* report available free of charge and to expand our range of services year after year. In addition to the annual publication of the *In Gold We Trust* report in four languages, we publish our *Monthly Gold Compass*, as well as ongoing information on our *In Gold We Trust* homepage at ingoldwetrust.report.

There can be few fields of human endeavor in which history counts for so little as in the world of finance.
John Kenneth Galbraith

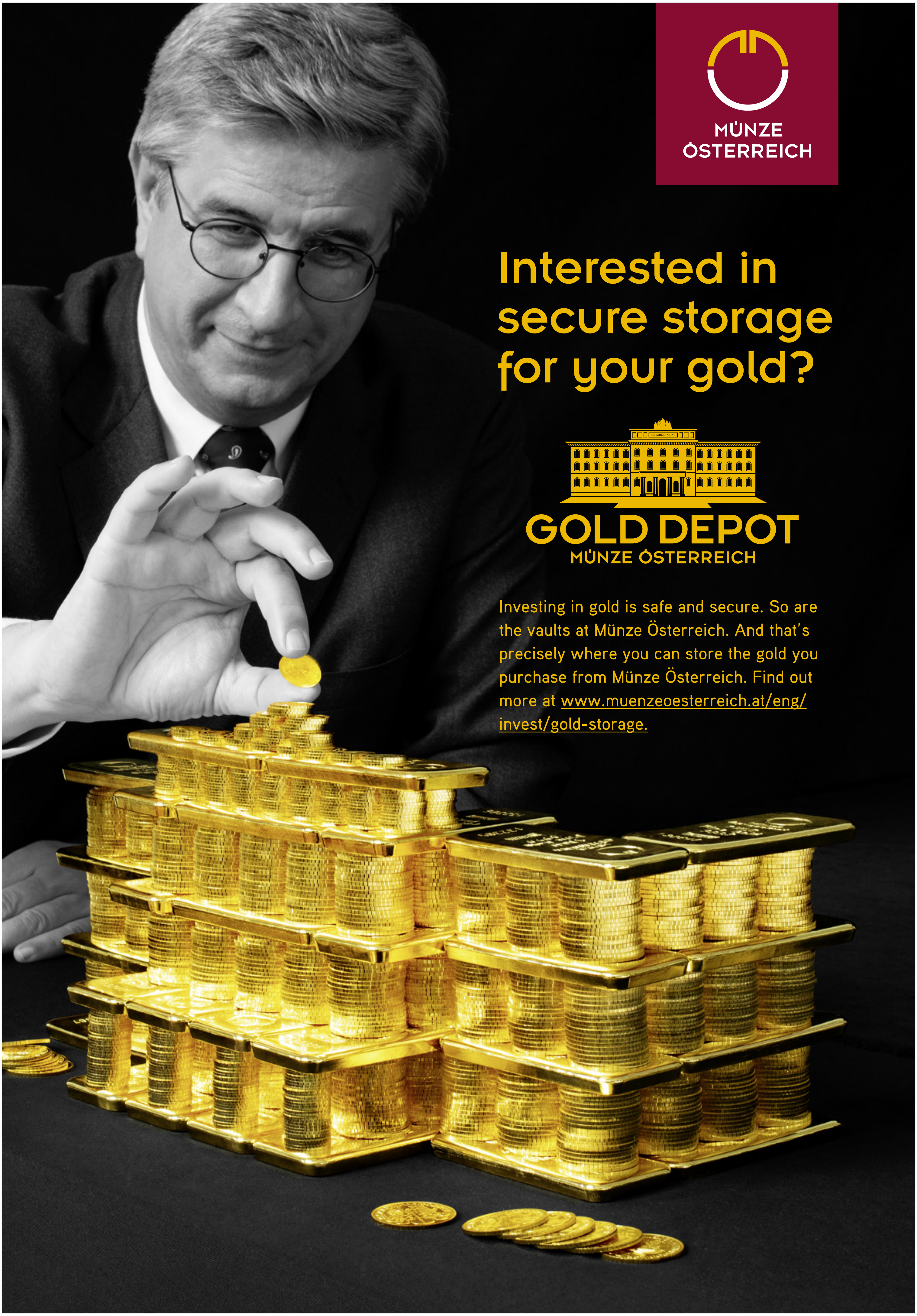
We consider the examination of the past as indispensable for a successful preparation of the future. As a guide to the topic of gold, we would therefore like to once again offer you, our valued readers, a comprehensive, informative and concise compilation.

Now, we invite you on our annual tour de force and hope that you enjoy reading our 17th *In Gold We Trust* report as much as we enjoyed writing it.

With warm regards from Liechtenstein,

Ronald-Peter Stöferle and Mark J. Valek

4 All colleagues are pictured in the gallery at the end of the *In* Gold We Trust report.
5 At the end of the *In Gold We Trust* report you will find an overview of our Premium Partners, including brief descriptions of the companies.


MÜNZE
ÖSTERREICH
Interested in secure storage for your gold?
GOLD DEPOT
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IGWT Report

Status Quo of Gold

No bet has been more certain to win in the centuries of monetary history than that a gold piece, inaccessible to the inflationary policies of governments, would preserve its purchasing power better than a banknote.

Wilhelm Röpke

- Over the past 15 months, the price of gold has marked new all-time highs in virtually every currency, with the notable exception of the US dollar.
- On a US dollar basis, the gold price closed Q1/2023 at its highest quarterly level ever.
- The BIS recently warned of the risks of a (too) firm US dollar, especially against the background of a changing relationship between the US dollar and commodities.
- Michael Hartnett (BofA) and Brent Johnson make numerous arguments for a weaker and a firmer US dollar, respectively.
- We assume that as soon as new all-time highs are reached in US dollar terms, the next trend phase of the gold bull market will be ushered in.
- The long-term upward trend of gold is clearly intact. The basis for further price increases seems excellent.

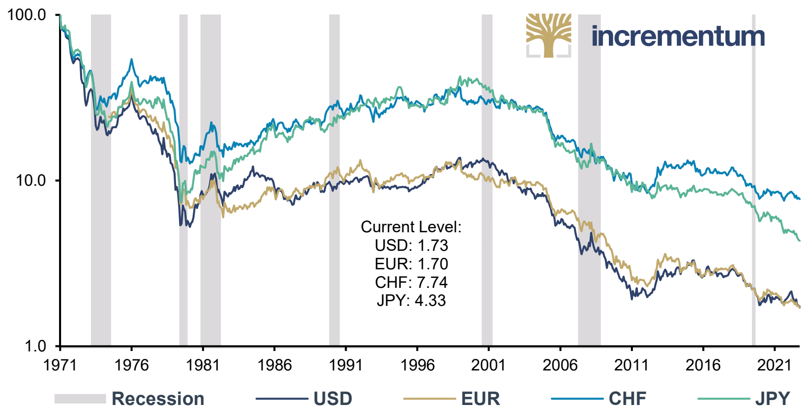
Everything you need to know is right there in front of you.
Jesse Livermore

What do the euro, the Swiss franc, the British pound, the Japanese yen, but also more exotic currencies such as the Ethiopian birr, the Tongan pa'anga, and the ngultrum, the currency of the Kingdom of Bhutan, have in common? In all of these currencies, gold has marked new all-time highs since the outbreak of the Ukraine war. Or, to put it another way, the purchasing power of these currencies, measured in gold, has reached new all-time lows.

Money is the most universal and most efficient system of mutual trust ever devised. Even people who do not believe in the same god or obey the same king are more than willing to use the same money.
Yuval Harari

Many people view gold primarily as an asset that they hope will rise in price. In doing so, however, they commit a momentous error in thinking. In reality, gold's value does not fluctuate. What does change is the purchasing power of fiat currencies measured in gold. These move to varying degrees, but always as a group relative to gold, the immovable anchor. **Thus, the price of gold does not *rise*, but fiat currencies depreciate over the long term relative to gold, some more, some less – an insight that is excellently confirmed by the following chart.**

Various Currencies (log), in Gold, 100 = 08/1971, 08/1971-05/2023



Source: Reuters Eikon, Incrementum AG

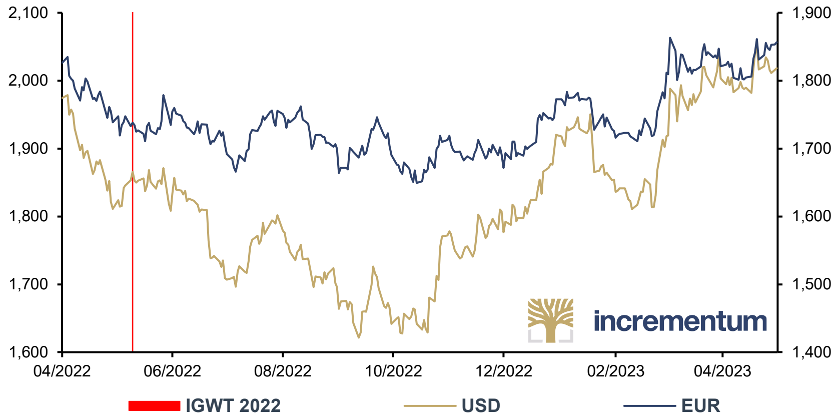
The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking.
Albert Einstein

But why do we emphasize this unusual monetary angle? New insights often emerge when one changes perspective. In our opinion, this shift in perspective - "*it is not the price of gold that is rising, but rather the purchasing power of fiat currencies that is falling*" - is critical, especially due to the current inflationary environment. Therefore, we want to carry out this monetary change of perspective on the following pages. Like Albert Einstein, who showed in the theory of relativity that the individual perception of a minute is extremely dependent on which side of the toilet door you are on.[6]

Let's now look at the gold price development in US dollars and euros since the last *In Gold We Trust* report. Shortly after the publication of last year's issue, on May 24, 2022, a correction lasting several months set in. Gold eased to USD 1,620 by late fall. In the wake of a significantly weaker US dollar, it then managed to turn around in Q4/2022, which ultimately marked the starting point of a superb rally. In Q1/2023, gold recorded its highest quarterly close ever at USD 1,975.

[6] *See* Ebert, Vince: *Lichtblick statt Blackout*, 2022, p. 198

Gold, in USD (lhs), and EUR (rhs), 04/2022-05/2023



Source: Reuters Eikon, Incrementum AG

Currencies don't float, they just sink at different rates.
Clyde Harrison

A classic of our *In Gold We Trust* report and keynotes is the presentation of the gold price development in the most important currencies. The full year 2022 was clearly positive for gold in all currencies, with the one exception of the US dollar. Gold in US dollars suffered from the marked appreciation of the dollar. On average, the price gain in other currencies was 7.2%. In the (former) safe-haven currency, the Japanese yen, the gold price rose by 13.7%. In euro terms, it was up 6%, for the 5th annual gain in a row, which ruthlessly reveals the glaring weakness of the European single currency. **In the current year, 2023, gold is clearly in the plus in all listed currencies, on average by 8.7%.**

As before, the average performance in this secular bull market remains impressive. The average annual performance from 2000 to today was 9.3%. During this period, gold outperformed virtually every other asset class and, above all, every other currency – despite significant corrections in the meantime.

Gold Performance since 2000 in Various Currencies

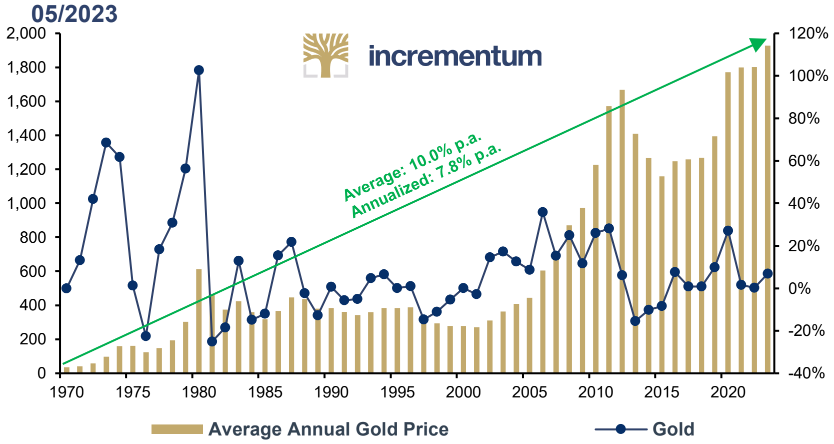
	USD	EUR	GBP	AUD	CAD	CNY	JPY	CHF	INR	Average
2000	-5.3%	1.2%	2.4%	11.2%	-1.9%	-5.4%	5.8%	-4.2%	1.4%	**0.6%**
2001	2.4%	8.4%	5.3%	12.0%	8.8%	2.4%	18.0%	5.5%	5.8%	**7.6%**
2002	24.4%	5.5%	12.3%	13.2%	22.9%	24.4%	12.2%	3.5%	23.7%	**15.8%**
2003	19.6%	-0.2%	8.0%	-10.7%	-1.3%	19.6%	8.1%	7.4%	13.9%	**7.2%**
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	25.0%	14.7%	21.2%	14.1%	22.6%	17.2%	18.8%	14.3%	28.0%	**19.5%**
2021	-3.6%	3.6%	-2.6%	2.2%	-4.3%	-6.1%	7.5%	-0.6%	-1.7%	**-0.6%**
2022	-0.2%	6.0%	11.6%	6.3%	7.0%	8.3%	13.7%	1.1%	10.8%	**7.2%**
2023 YTD	8.3%	7.3%	5.3%	11.0%	7.9%	10.0%	14.0%	5.4%	8.6%	**8.7%**
Average	**9.3%**	**8.9%**	**10.6%**	**8.8%**	**8.6%**	**8.4%**	**10.4%**	**6.6%**	**12.0%**	**9.3%**

Source: Reuters Eikon (as of 05/19/2023), Incrementum AG

Money is the perhaps most concentrated and pointed form and expression of confidence in the societal-governmental order.
George Simmel

Flipping back even further in the history books, since the "IPO of gold" on August 15, 1971, the average annual increase of the gold price in US dollars amounts to 10.0%. The annualized growth rate (CAGR) is 7.8 %. **In the previous year, gold reached a new all-time high with an annual average price of USD 1,802.** Since the beginning of the year, the average gold price is USD 1,927. The following chart impressively demonstrates that regular accumulation of gold ("gold saving" or "gold DCA") using the cost-average effect seems very reasonable.

Annual Average Gold Price, in USD (lhs), and yoy (rhs), 1970-05/2023

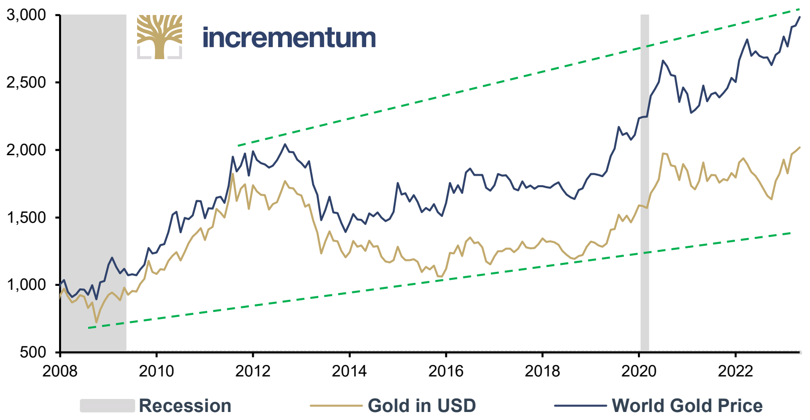


Source: Reuters Eikon, Incrementum AG

Only now do I see the big picture.
Big L

Let's now return to the current big picture. The next chart is one of the classics of every *In Gold We Trust* report. It shows the so-called *world gold price*, which represents the gold price not in US dollars or euros but as the trade-weighted external value of the US dollar. It clearly looks as if the long-term upward trend is intact. **However, the rapidly growing gap between the gold price in US dollars and the world gold price as a result of US dollar strength can also be clearly seen.**

Gold in USD, and World Gold Price, in USD, 01/2008-05/2023



Source: Reuters Eikon, Incrementum AG

Now we would like to introduce our new Gold Performance Triangle, which provides a good overview of the gold price development for various time periods. By the way, we update this and many other charts every month in our Monthly Gold Compass. The chart shows the performance for all time combinations of buying year (y-axis) and selling year (x-axis). It can be clearly seen that a purchase in the years 2010-2012 was not immediately profitable but moved into profitability in 2020.

Gold Performance Triangle (USD), in %, 1999-2023YTD

Purchase at the End of / Sold at the End of	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 YTD
1999	-5.3	-3.1	20.6	44.3	52.4	79.9	121.3	189.8	205.5	281.1	393.7	443.9	482.4	319.1	311.7	269.0	300.5	353.0	346.2	427.7	559.6	536.0	534.6	602.0
2000		2.4	27.4	52.4	61.0	90.0	133.8	206.2	222.7	302.6	421.6	474.6	515.2	342.7	334.9	289.8	323.1	378.6	371.3	457.4	596.9	571.8	570.4	641.6
2001			24.4	48.8	57.2	85.6	128.3	199.0	215.1	293.1	409.3	461.1	500.8	332.3	324.7	280.7	313.2	367.3	360.3	444.3	580.5	556.0	554.6	624.2
2002				19.6	26.4	49.2	83.5	140.3	153.3	216.0	309.4	351.1	382.9	247.5	241.4	206.0	232.1	275.7	270.0	337.6	447.0	427.4	426.2	482.1
2003					5.6	24.7	53.4	100.9	111.7	164.2	242.2	277.0	303.6	190.5	185.3	155.8	177.6	214.0	209.2	265.7	357.2	340.8	339.8	386.6
2004						18.1	45.2	90.2	100.5	150.1	224.0	257.0	282.2	175.0	170.2	142.2	162.8	197.3	192.8	246.3	332.9	317.3	316.4	360.7
2005							23.0	61.1	69.8	111.9	174.4	202.4	223.7	133.0	128.8	105.1	122.6	151.8	148.0	193.3	266.7	253.5	252.7	290.2
2006								30.9	38.0	72.2	123.1	145.8	163.1	89.4	86.0	66.7	81.0	104.7	101.6	138.4	198.0	187.3	186.7	217.2
2007									5.4	31.5	70.4	87.7	101.0	44.6	42.0	27.3	38.2	56.3	54.0	82.1	127.6	119.4	119.0	142.2
2008										24.8	61.6	78.1	90.7	37.2	34.8	20.8	31.1	48.3	46.1	72.7	116.0	108.2	107.7	129.8
2009											29.5	42.7	52.8	10.0	8.0	-3.2	5.1	18.9	17.1	38.5	73.1	66.9	66.5	84.2
2010												10.2	18.0	-15.1	-16.6	-25.3	-18.9	-8.2	-9.6	6.9	33.6	28.8	28.5	42.2
2011													7.1	-22.9	-24.3	-32.2	-26.4	-16.7	-18.0	-3.0	21.3	16.9	16.7	29.1
2012														-28.0	-29.3	-36.6	-31.2	-22.2	-23.4	-9.4	13.3	9.2	9.0	20.5
2013															-1.8	-12.0	-4.4	8.1	6.5	25.9	57.4	51.7	51.4	67.5
2014																-10.4	-2.7	10.0	8.4	28.2	60.2	54.5	54.1	70.5
2015																	8.5	22.8	20.9	43.0	78.8	72.3	72.0	90.2
2016																		13.1	11.4	31.7	64.7	58.8	58.4	75.3
2017																			-1.5	16.5	45.6	40.4	40.1	55.0
2018																				18.3	47.8	42.5	42.2	57.3
2019																					25.0	20.5	20.3	33.0
2020																						-3.6	-3.8	6.4
2021																							-0.2	10.4
2022																								10.6

Source: Reuters Eikon (as of 05/15/2023), Incrementum AG

The almighty dollar, that great object of universal devotion throughout our land, seems to have no genuine devotees in these peculiar villages.
Washington Irving

The risks of an (overly) firm US dollar, especially against the background of a changing relationship between the US dollar and commodities, have recently been addressed by the Bank for International Settlements (BIS) in a paper entitled "The changing nexus between commodity prices and the dollar: causes and implications". Previously, the US dollar was negatively correlated with commodity prices, in part because the US was a net energy importer. But since the US became a net energy exporter in 2019, rising energy prices have improved the US trade balance and strengthened the US dollar. This makes things more complex for investors and could cause problems for the global economy should the US dollar regain strength after the period of weakness in recent months. The BIS notes, "*[T]he US dollar strength is likely to go hand-in-hand with higher commodity prices in the future. Other things equal, this means that US dollar strength will exert an even larger contractionary effect on the global economy*."

Think about currency allocation, not just asset allocation.
Bridgewater Associates

The impact of the now-positive correlation between the US dollar and commodity prices is likely to be felt most strongly in commodity-importing economies. For these countries, the rise in US dollar commodity prices will further increase domestic inflationary pressures, as the dampening effect of a US dollar depreciation now seems to have been lost. To give a concrete example: If the price of oil in US dollars rises by 10%, but the US dollar depreciates by 10% against all other currencies, the price of oil measured in non-US currencies remains unchanged. However, if the oil price rises by 10% and the US dollar appreciates by 10% against all other currencies, the oil price in non-US economies appreciates by 20% in local currency terms.

But commodity exporters will also be affected, according to this study. If their exchange rates appreciate less against the US dollar during a commodity boom and depreciate less during a downturn, exchange rate movements may provide a less effective "shock absorber" than in the past. As a result, more active macroeconomic stabilization policies may be needed to manage the economic consequences of price volatility, according to the BIS.

I drink your milkshake.
Daniel Plainview, "There will be blood"

Do we now expect a firmer or weaker US dollar? To cut a long story short, we don't have a very strong opinion at the moment. Nevertheless, over the short to medium term, we are leaning more towards dollar-weakness.

In general, one often gets the impression that if you are a *chrysophile*, i.e. a friend of gold, you must necessarily also be a US dollar bear. In our opinion, this is a fallacy, because among gold bulls there are numerous renowned proponents of a strong-US-dollar thesis. Among them is our esteemed colleague Brent Johnson, who cites the following arguments for a significantly firmer greenback, among others:

- **Because of its status as the leading reserve and trade currency, there is a global demand for the US dollar** that does not exist for the euro, yen, ruble, lira, real, peso, and so on. The additional demand for US dollars created by the Eurodollar system[7] means that US monetary policy must

[7] See "How Bankers Turned Money into 'Σ 0 ∞ € ¥'," *In Gold We Trust* report 2021

take into account global demand for US dollars, not just domestic demand. This allows the US to "get away" with a much looser monetary policy, which would spell the end for all other currencies due to limited demand.

- **Currently, there is no clear alternative to the US dollar payment system.** While new payment systems are being designed and introduced, they do not (yet) have the same network effect or level of awareness as the system used for Eurodollar funding.
- Bilateral trade agreements between non-US countries continue to grow, but they pale in comparison to the clear dominance of global trade conducted in US dollars.
- **Despite the massive provision of liquidity, which may again have to come from the Federal Reserve, this will not happen in a vacuum**. Central banks in the rest of the world will also be forced to increase the money supply dramatically.
- **The US has the deepest and most liquid capital markets.** In addition, as the world's largest consumer, the US is usually the No. 1 or No. 2 largest customer for most exporters in the world. These exporters will need to continue to use the US dollar to sell their goods in the US market.
- **Eurodollar debt owed by institutions and corporations outside the United States creates demand for US dollars to service and ultimately repay this US dollar debt.** According to the BIS, on-balance-sheet debt held by non-US companies is at least USD 13trn, and a recent BIS study estimates that off-balance-sheet USD liabilities are closer to USD 80trn.
- **Even if the process of de-dollarization, which is very similar to de-globalization, ends up being successful, as long as it is underway it is not necessarily negative for the external value of the US dollar.** De-dollarization would mean fewer US dollars circulating in the world economy. However, the USD debt mentioned above would continue to exist. A lack of USD liquidity would make it more difficult to service this debt and could contribute to the appreciation of the US dollar in a scramble to service and repay this debt.
- Much of the non-US global economy conducts its business in eurodollars, i.e., US dollars outside the US banking system, but does not have the ability to print US dollars or refinance directly with the Federal Reserve. **This makes the Federal Reserve the de facto central bank for the rest of the world as well.**
- **The US will use US dollar liquidity, especially repo and swap lines, as a weapon to support and enforce the new US foreign policy**. Friends will be rewarded with access to liquidity, while competitors will be punished by having their liquidity withdrawn.
- **If the US dollar were truly threatened, the US would use its military to enforce the use of the dollar as a global reserve currency.**

We remain patient bears in a world of impatient bears.
Michael Hartnett

We largely agree with Brent Johnson's argumentation and consider the US dollar to be structurally the *least dirty shirt* or the *one-eyed man among the blind*. However, we also see considerable forces at work that argue for a significantly weaker US dollar. BofA's chief strategist, Michael Hartnett, whom we also hold in high regard, cites the following reasons for further US dollar weakness, among others:

- There is a rising probability of default on US debt: 5Y CDS at 65 basis points, up from 15 basis points a year ago.
- The banking crisis in the USA means that the US dollar is losing its appeal as a safe haven.
- The petroyuan idea is gaining momentum.
- China and Japan are reducing their holdings of US government bonds; currently, foreigners hold USD 7.4trn in US government bonds.
- Skyrocketing US budget deficit: The deficit amounted to USD 1.8trn in the past 12 months (6.5% of GDP).
- The US debt ceiling is closing in: The budget deficit in March alone totaled USD 378bn, shrinking Washington's balance at the Federal Reserve (TGA) to just USD 109bn. The US government is on track to run out of money soon.

You go around the corner into the Café 80s… go in and order a Pepsi. Here is a 50 [bill].
Doc Emmett Brown to Marty McFly, *Back to the Future*

The 10-year breakeven rate, which tracks the yield differential between nominal government bonds and inflation-linked bonds (TIPS), shows a strong negative correlation with the US Dollar Index. **If the Federal Reserve were again to act as the first player among central banks and cut interest rates, this would put further pressure on the US dollar and lead to an increase in inflation expectations.**

US Breakeven 10 Year (lhs), and DXY (rhs, inverted), 01/2010-05/2023

Source: Reuters Eikon, Incrementum AG

Conclusion

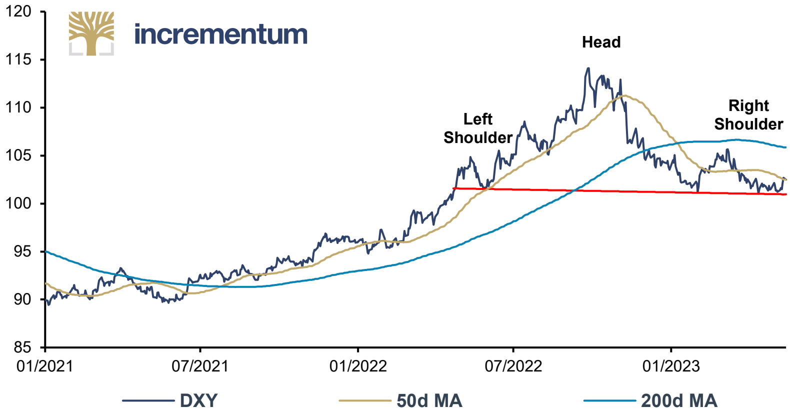
The primary trend is a law unto itself. It will continue until it dies of exhaustion.
Richard Russell

The whole world seemingly looks exclusively at the gold price in US dollars. The whole world? No. We have also looked at the many currencies that have recently marked lows in relation to gold. The fact that even in the eurozone the gold price in US dollars enjoys more media attention than the gold price in euros, and that therefore the quite considerable gains of gold in euros, especially in the past year, are being ignored, seems incomprehensible to us, and makes gold appear much less attractive to euro investors than it actually is.

I like putting all my eggs in one basket and then watching the basket very carefully.
Stanley Druckenmiller

Over the next few months, we – like Stanley Druckenmiller, whom we hold in high esteem – consider a weaker US dollar to be realistic. A look at the DXY chart reveals a clear shoulder-head-shoulder formation. Should the (psychologically important) level at 100 be breached substantially to the downside, the price target would be around 85.

DXY (Head and Shoulders Pattern), 01/2021-05/2023



Source: Reuters Eikon, Incrementum AG

However, we assume that as soon as the gold price marks new all-time highs in US dollar terms, the next trend phase will be ushered in. Gold will not have to fear this showdown with reality.

Status Quo of Gold Relative to Stocks, Bonds, and Commodities

60/40 won't cut it anymore and should be 20/40/20/20 instead, with the weights representing cash, stocks, bonds, and commodities.

Zoltan Pozsar

- **In 2022, for the first time in 42 years, stocks and bonds suffered double-digit losses in the same year. The 17.9% decline in a 60/40 portfolio was the worst annual performance since a 21% decline in 1937.**
- **Wall Street's earnings estimates continue to appear too optimistic to us. Our assessment is that the first half of the bear market was characterized by a multiple compression and that the second half will be characterized by an earnings recession.**
- **One of our central theories of the past few years is now slowly being confirmed: (government) bonds are no longer the antifragile portfolio foundation they have been for the past 40 years.**
- **As predicted in the *In Gold We Trust* report 2020, the commodities sector has risen like a phoenix from the ashes and is now in a secular bull market. We strongly believe that the commodity bull market has taken a healthy breather and could soon mark a new phase of the uptrend.**

Don't fear change, change fear.
Susan Rice

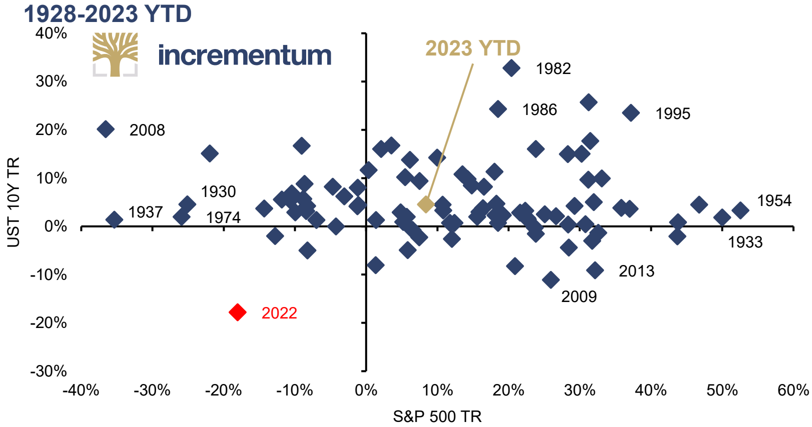
If we had to describe the last 12 months in the capital markets with a single word, it would probably be *ZOZOBRA*. What does this term, which has nothing to do with zoos or bras, mean? *Zozobra* is a Spanish term for *fear*. A specific fear, with connotations reminiscent of the swaying of a ship that is about to capsize. The term emerged as a key concept among Mexican intellectuals in the early 20th century. *Zozobra* refers to the feeling of losing one's footing, of feeling out of place in the world, or of not being able to make sense of what is happening.[8]

Zozobra is very reminiscent of the current situation in politics, in our society, and especially in financial markets. In the past few months, common models, investment philosophies and portfolio constructions have been called into question and overturned. **The trigger? It has become apparent: Inflation is the Achilles' heel of many portfolios.**

Has anyone ever parted your hair with a sledgehammer?
Bud Spencer

In 2022, for the first time in 42 years, stocks and bonds suffered double-digit losses in the same year. In a keynote, we casually referred to this as a "Bud Spencer stereo rattle for the portfolio". The 17.9% decline in a 60/40 portfolio was the worst annual performance since a 21% decline in 1937. In absolute terms, the price decline appears even more dramatic. The global stock market has lost almost USD 10trn, the global bond market USD 25bn in value. This corresponds to about one third of global GDP.

Annual Returns for S&P 500 TR (x-axis), and UST 10Y (y-axis), 1928-2023 YTD



Source: NYU, Reuters Eikon (as of 05/15/2023), Incrementum AG

The poor performance wasn't the sole cause for concern. that made 2022 a special investment year, but also the following factors:

- Common correlation patterns – equities/bonds, US dollar/commodities – suddenly collapsed.
- Volatility returned with full force, especially in currency and bond markets.
- Liquidity was at risk even in the most liquid markets, especially those for government bonds: e.g., UK gilts, JGBs, etc.

[8] The term *Zozobra* is often used in connection with the annual event in Santa Fe, New Mexico, where people gather to burn an effigy of *Old Man Gloom*, symbolizing release from all their worries and fears. The burning of the effigy is said to be a cathartic experience that helps people let go of their negative feelings and start anew.

Against this background, we would like to make our traditional comparison of gold relative to stocks, bonds and commodities on the following pages in order to get a better feel for the gold price development. **One thing we can say in advance: Gold works in times of *Zozobra*.**

Gold Compared to Stocks

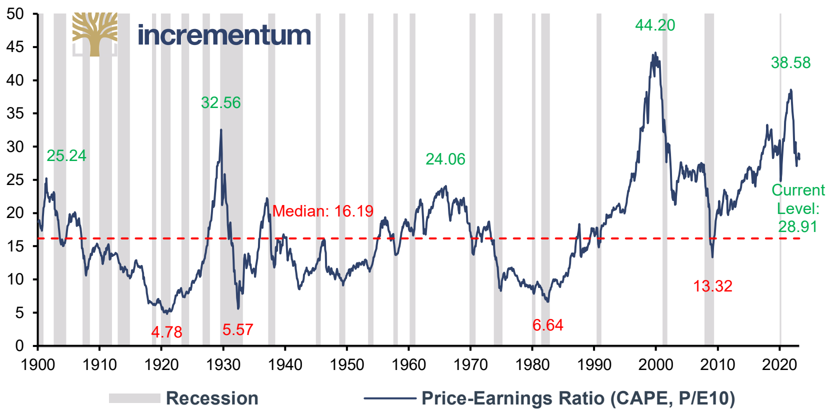
> *"History shows that equities are at their most vulnerable when being outperformed by the yellow metal."*
>
> Martin Pring

The annual performance of the Nasdaq Composite (-33.1%), Russell 2000 (-21.6%), S&P 500 (-19.4%) and Dow Jones (-8.8%) in 2022 resembled a tragedy. Are (US) equities now already attractively valued? Not really. US equities ended 2022 with a Shiller P/E ratio of 28.3. While this is a clear drop compared to year-end 2021, when it stood at 38.3, we think it is questionable whether this valuation is already enough for a cycle low.

Bear markets have three stages – sharp down, reflexive rebound, and a drawn-out fundamental downtrend.
Bob Farrell

The current Shiller/PE of 28.91 remains well above previous lows such as 13.3 in March 2009, 6.6 in August 1982, and 4.8 in December 1920. Interesting side note: At the market top before the Global Financial Crisis, the multiple was 27.3 in October 2007 and therefore even slightly lower than currently. If you believe in a reversion to the mean, the bottom of this bear market is still a long way off, especially as the median for the last 123 years is 16.19.

Price-Earnings Ratio (CAPE, P/E10), 01/1900-04/2023



Source: Yale.edu, Reuters Eikon, Incrementum AG

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

In addition, Wall Street's earnings estimates continue to appear too optimistic to us, especially in the event that the recession case described in the next chapter materializes. The consensus estimate for EPS is a gentle minus 1.56% for 2023 and a hefty plus 10% for 2024. That coheres with a recession about as well as Kim Kardashian coheres with her ex-husband Kanye West. During a recession, S&P 500 gains have fallen an average of 16.4% over the past 70 years. **In this respect, our assessment is that the first half of the bear market was characterized by a multiple compression and that the second half will be characterized by an earnings recession.**

S&P 500 EPS, P/E and Performance, 1957-2020

Recession	S&P 500 Δ in EPS	S&P 500 Δ in P/E	S&P 500 Performance
08/1957-04/1958	-12.1%	-18.5%	-21.6%
04/1960-02/1961	-12.4%	-22.1%	-5.2%
12/1969-11/1970	-17.0%	-21.8%	-36.1%
11/1973-03/1975	18.4%	-61.9%	-48.2%
01/1980-07/1980	7.1%	-26.8%	-17.1%
07/1981-11/1982	-11.8%	-19.7%	-27.1%
01/1990-03/1991	-39.7%	-7.7%	-19.9%
03/2001-11/2001	-25.9%	-27.7%	-49.1%
12/2007-06/2009	-50.1%	-38.0%	-56.8%
02/2020-04/2020	-20.3%	-15.5%	-33.9%
Mean	**-16.4%**	**-26.0%**	**-31.5%**
Median	**-14.7%**	**-22.0%**	**-30.5%**

Source: Putnam, Incrementum AG

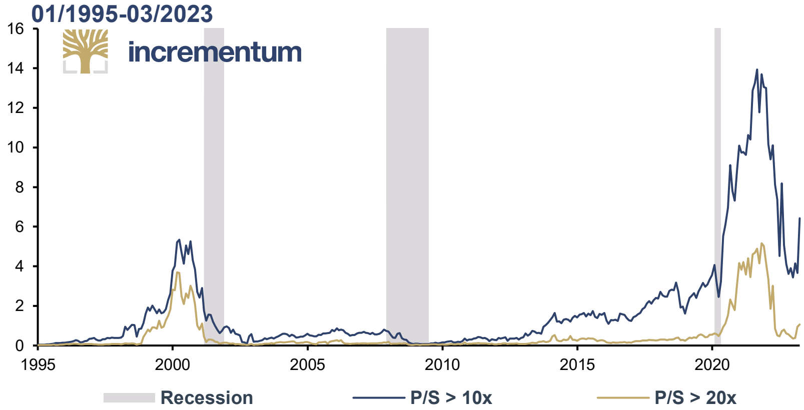
Courtesy of Hedgeye

In the *In Gold We Trust* report 2021 we warned forcefully that the markets were in a hysterical mania fed by ultra-loose monetary and fiscal policy. The liquidity party was abruptly ended last year by Jerome Powell and his international counterparts of neo-hawks. True to the motto "*If you panic, panic first,*" the Federal Reserve responded by withdrawing the monetary punchbowl. The sequence of events reminds us of a debauched party at which Pete Doherty, Keith Richards, and Johnny Depp are getting intoxicated to the max. But suddenly, as if out of the blue, the party is over and the surprised parvenus are sent, whether they like it or not, on an Ayurveda retreat in Sri Lanka.

In bull markets, people have faith; in bear markets, doubt. The other way around might be more profitable.
Jim Grant

That the party came to an abrupt end, especially in the tech segment, is shown by the chart below. As of October 2021, the market capitalization of all companies trading at 10 or 20 times or more revenue per share (P/S) had risen to nearly USD 14 and USD 5trn, respectively. These are valuation levels that make the dot.com bubble look like a deep-value party. Compared to those bubbly valuation levels, some normalcy has now returned. Companies with a P/S ratio of more than 10x are now valued at USD 6.5bn. This level remains above the peak of the tech bubble in 2000.

Market Cap of Stocks with P/S > 10x and P/S > 20x, in USD trn, 01/1995-03/2023



Source: Kailash Capital, LLC, Reuters Eikon, Incrementum AG

Recency bias is a cognitive bias that favors recent events over historical ones; a memory bias. Recency bias gives "greater importance to the most recent event".
Wikipedia

Are investors now – once again – succumbing to a *recency bias*? The rally of the US stock market in Q1/2023 was particularly characterized by the fact that only three tech stocks – Apple, Nvidia and Microsoft – were responsible for 54% of the price gain of the S&P 500. The top ten stocks, all from the technology sector, accounted for over 95% of the increase.

What is the reason for this return to old behavior patterns? Anatole Kaletsky speaks in this context of *pessimistic bulls*. He uses this term to describe investors who consider themselves cautiously pessimistic because they expect a mild recession in the United States. In reality, however, they are implicitly optimistic because they hope that this recession will quickly lower inflation to acceptable levels and force the Federal Reserve to ease monetary policy again. This, they hope, will push bond and stock prices back above the levels seen before the outbreak of the Ukraine war and, in particular, boost the technology sector to its former heights.

Last rate hike in a cycle is much like the last kiss in a relationship: you rarely think it is going to be the last one, while it is actually happening.
Alex Gurevich

But this hope is tremendously deceptive, at least in the short term. The following table shows the development of the S&P 500 between the last interest rate hike and the last interest rate cut. One can immediately see that it would have been ill-advised to buy stocks at the end of the rate hike cycle and then hold them until the end of the rate cut campaign. ***Pessimistic bulls* should accordingly be cautious.**

US Stock Market Performance after the Last Rate Hike

Last Hike	Rate	Last Cut	Rate	Δ S&P 500	Largest Drawdown
05/16/2000	6.50%	06/25/2003	1.00%	-33.47%	48.82%
06/20/2006	5.25%	12/16/2008	0.00%	-26.36%	49.99%
12/19/2018	2.50%	03/16/2020	0.00%	-4.82%	29.53%
05/03/2023	5.25%	?	?	?	?

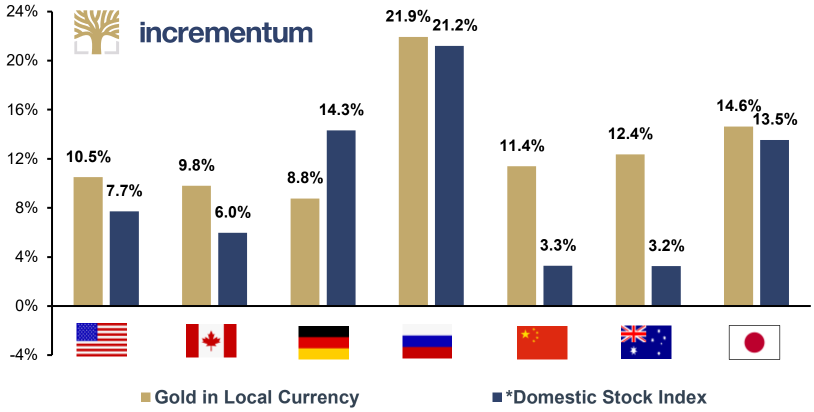
Source: Reuters Eikon, Incrementum AG

In my opinion, it is important to have a stable defense.
Manuel Neuer

What does this challenging stock market environment now mean for gold? Loyal readers know: For us, the developments on the stock markets represent the important opportunity cost of gold. Since the beginning of the year, gold has proven itself to be the last line of defence once again, sliding in with a last ditch tackle to save stocks and bonds from conceding an embarrassing own goal. Gold is a quasi "Robert Pecl of the portfolio".[9]

[9] 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)

Gold in Local Currency, and Domestic Stock Index, Annual Performance in %, 2023 YTD

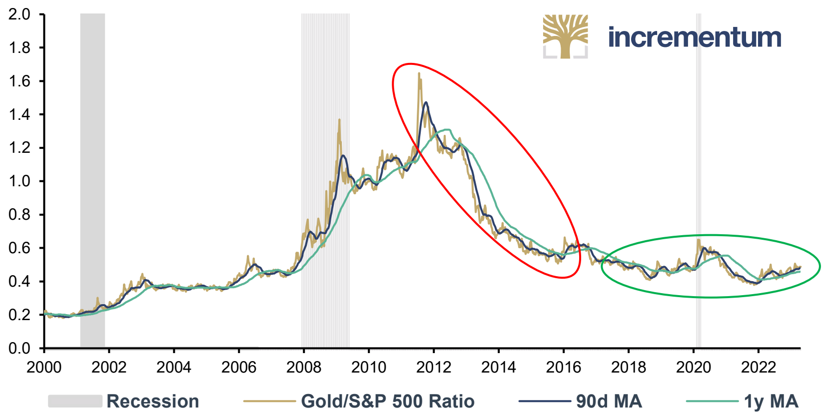


Source: Reuters Eikon (as of 05/15/2023), Incrementum AG
* US = S&P 500, CA = TSX Comp., DE = DAX, RU = MOEX, CN = SCI 300, AU = ASX 200, JP = Nikkei

Gold's properties as a portfolio diversifier have been institutionally forgotten by those who have spent a lifetime confusing the declining cost of money with investment genius.
Charlie Erith

The following chart shows the gold/S&P 500 ratio since 2000. The downward trend, i.e. declining purchasing power of an ounce of gold measured in equities, lasted from 2011 to the end of 2021. Currently, it seems that gold is slowly building up relative strength again. The ratio is now slightly above the 90-day and the moving averages again.

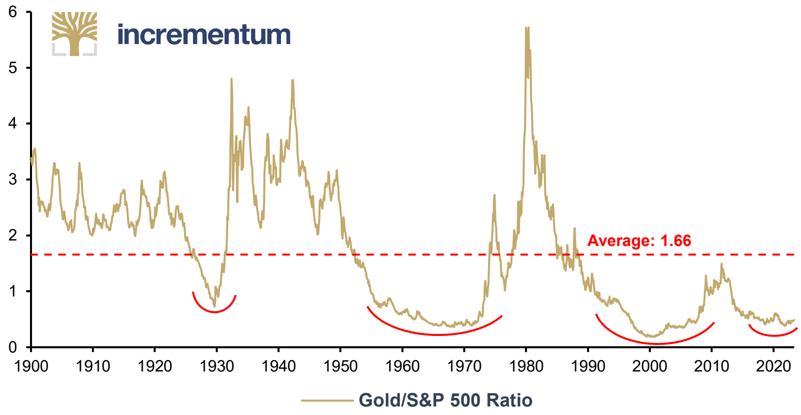
Gold/S&P 500 Ratio, 01/2000-05/2023



Source: Reuters Eikon, Incrementum AG

Let's now look at this ratio over the longer term, since 1900. Gold looks clearly undervalued compared to US equities and may indeed have completed a secular turnaround. The downtrend seems to have been broken: The moving average has stabilized and is now pointing slightly upward again. The long-term gold/S&P 500 ratio stands at 1.66, but currently it is only 0.49. Based on the previous counter-trend rallies, gold could more than triple (if the S&P 500 remains unchanged) to reach its 123-year average.

Gold/S&P 500 Ratio, 01/1900-05/2023



Source: Reuters Eikon, Incrementum AG

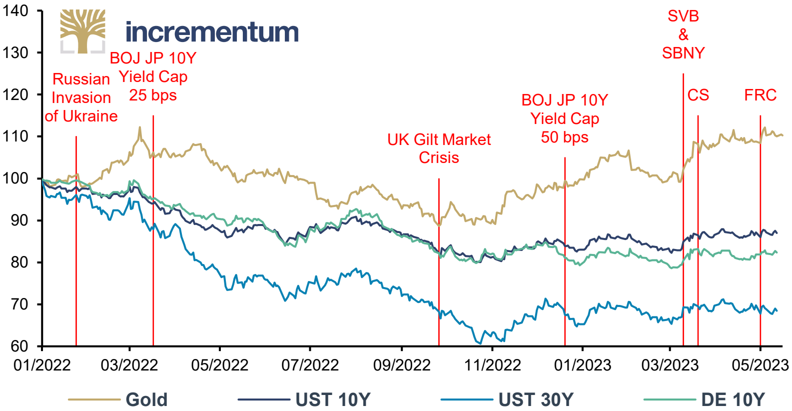
Gold Compared to Bonds

> *"Inflation is like kryptonite for bonds."*
> Jason Zweig

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

For bond investors, the past year resembled the performance of the German national soccer team at the World Cup in Qatar: check off and forget. Did the big bond bear market start in 2022? One of our central theories of the past few years is now slowly being confirmed: (government) bonds are no longer the antifragile portfolio foundation they have been for the past 40 years.

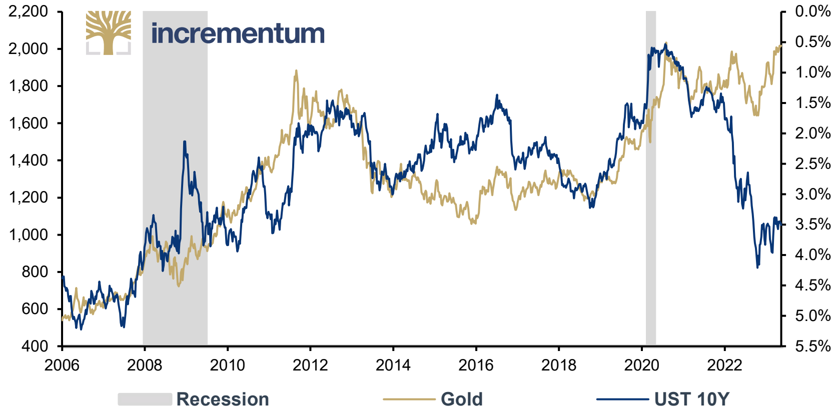
Gold, UST 10Y, UST 30Y and DE 10Y, 100 = 01/2022, 01/2022-05/2023



Source: Reuters Eikon, Incrementum AG

The decoupling between gold and bonds that we announced in previous years has thus taken place in recent months. **The bond market and the gold market are sending the same message: Inflation is the new reality.**

Gold (lhs), in USD, and UST 10Y (rhs, inverted), 01/2006-05/2023



Source: Reuters Eikon, Incrementum AG

Increasing inflation volatility simply means inflation going up and down more sharply, more often. If inflation volatility is the future, bond volatility won't be far behind. And bond volatility will have severe implications for portfolios built around a mean-variance framework.
Henry Maxey

An underappreciated reason for the sell-off in long-dated bonds may be investors' realization that policy proposals to address price pressures are fueling inflation rather than reining it in.[10] Whether in Italy, France, Germany or California, the most common proposal to combat high energy prices is fuel subsidies and price caps. Taxes on energy companies' windfall profits or special dividends have been introduced to finance these subsidies and tax cuts. These are all measures that are hardly intended to encourage investment. **The market recognizes that the measures adopted to combat inflation – whether fiscal, monetary, regulatory or geopolitical – ensure that the inflationary environment will continue.**

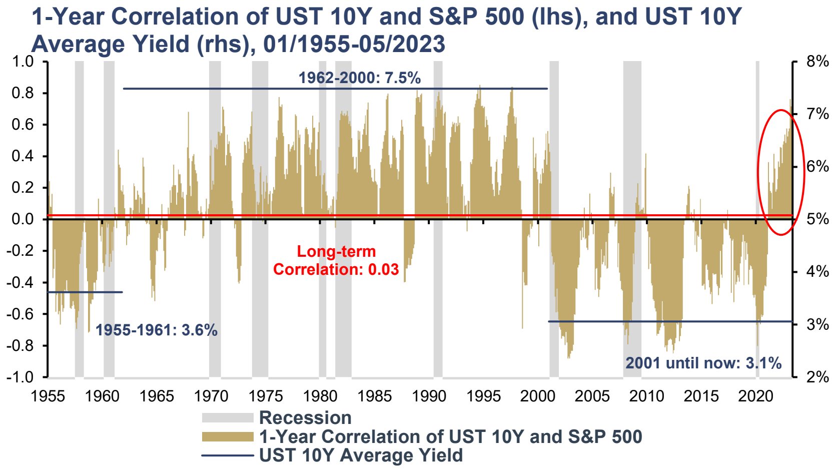
The consequences of stubborn inflation on mixed portfolios, risk-parity investment strategies, etc. could be observed impressively in 2022. Stock-bond correlation regimes are stable for a long time but can reverse rapidly, usually in response to higher inflation rates. The bulk of today's market participants could hardly imagine the impact of such a "*correlation pole jump*", as many investment concepts are built on a negative correlation between the two main asset classes.

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

However, the negative correlation is the exception rather than the rule when viewed over the long term. For example, the correlation between stocks and bonds in the USA has been slightly positive in 70 of the last 100 years. The decisive factor for the negative correlation in the last four decades was primarily the low inflationary pressure or the decreasing inflation volatility in the course of the Great Moderation.

The following chart is already a classic of this publication. It shows the one-year rolling correlation between 10-year US Treasury bonds and the S&P 500 as well as the average yield of 10-year Treasuries. You can clearly see that the 1-year correlation has recently turned into positive territory. The correlation coefficient between equities and bonds in the USA since 1955 is around 0.03.

[10] *See* Gavekal: "The Fixed Income Market Meltdown," March 28, 2022



Source: FRB, S&P, BofA Merrill Lynch US Equity & US Quant Strategy, Reuters Eikon, Incrementum AG

Over the past four decades, bonds have been a natural ballast to a stock portfolio. In the coming decade(s), bonds will no longer be negatively correlated to stocks and save your portfolio in times of stress, but will instead become the anchor that drags your portfolio lower.
Kevin Muir

However, an analysis of individual periods shows that equities and bonds were uncorrelated other than in exceptional cases. Between 1960 and 2000, when high (nominal) interest rates dominated market activity for long periods, the correlation coefficient was usually above 0.2, while in an environment of low inflation and interest rates it was usually less than -0.2. **Currently, inflation is thus again positively influencing correlation properties, which is probably causing heated discussions at asset allocation committees and sleepless nights for portfolio managers.**

If the relationship is now reversed on a sustained basis, the 60/40 portfolio would be deprived of its foundation – namely, a negative correlation between equities and bonds. **Could bonds now hand over the scepter to gold?**

Gold and Commodities

> *“Commodities should include three types of gold: yellow, black, and white. Yellow gold is gold bars. Black gold is oil. White gold is lithium for EVs.”*
> Zoltan Pozsar

I was an outsider, but as history shows, outsiders always have a chance.
Otto Rehhagel

Last year, we summarized the situation on the commodities market as follows: “*From surplus to* scarcity”. As predicted in the *In Gold We Trust* report 2020, the commodities sector has risen like a phoenix from the ashes and is now in a secular bull market. **It’s a bull market that is, however, negated, ignored, or at best mildly smiled at by the bulk of the investment community, just like the Greek national team at the 2004 European Football Championship, but only of course until its triumph in the final.**

It is amazing how resilient the commodity boom is, even though the global economic engine is sputtering, and interest rates are rising rapidly. With a plus of 13.8%, the Bloomberg Commodity Index (BCOM) made significant gains in the previous year. The table below shows the strongly varying performance of the commodity subsectors. Given the divergent commodity performances of recent months, we assume that the commodity sector is already anticipating a recession. However, one can also observe that all five sub-sectors are still well below their all-time highs and should therefore offer further upside potential.

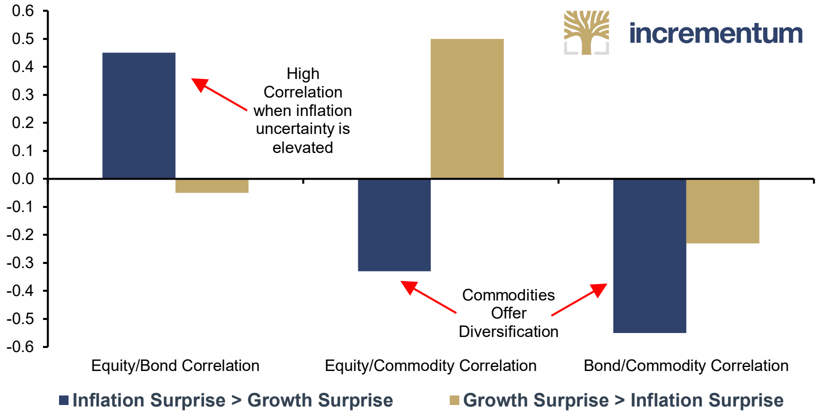
	Bloomberg Industrial Metals Subindex	Bloomberg Precious Metals Subindex	Bloomberg Agriculture Subindex	Bloomberg Energy Subindex	Bloomberg Livestock Subindex	BCOM Index
ATH	266.76	306.85	143.33	516.66	131.99	273.95
Date ATH	04/05/2007	22/08/2011	29/05/1997	29/09/2005	04/10/1993	02/07/2008
ATL	53.90	49.66	34.15	15.47	16.21	59.48
Date ATL	07/11/2001	02/04/2001	26/06/2020	27/04/2020	13/04/2020	18/03/2020
YTD	-11.7%	6.5%	-2.1%	-24.0%	-6.6%	-9.3%
2022 Performance	-4.4%	-1.9%	13.2%	33.5%	5.3%	13.8%
% Below ATH	-45.3%	-25.4%	-53.0%	-93.9%	-83.3%	-57.0%
% Above ATL	170.9%	360.7%	97.3%	102.6%	36.0%	72.0%

Source: Reuters Eikon (as of 12/05/2023), Incrementum AG

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

Nevertheless, commodities continue to be as unpopular with institutional investors as fur-lined gloves are in high summer. Looking at the long-term, historical performance attributes of commodity investments, the positive case is clear. AQR Research showed in its highly readable study "Building a Better Commodities Portfolio" that bonds and stocks are positively correlated over long periods of time, while commodities are negatively correlated with both. This is especially true during periods of inflation surprises.

Correlations during Inflation and Growth Surprise Periods, 01/1972-12/2021



Source: AQR, Incrementum AG

Adding commodities to a typical portfolio of 60% equities and 40% bonds thus increases risk-adjusted returns. The calculations of the AQR study result in the following performance:

Asset Class Performance, 02/1877–12/2021

	Annualized Total Return	Volatility	Sharpe Ratio
Global Stocks	9.9%	13.4%	0.48
Global Bonds	5.0%	4.3%	0.36
Commodities	8.2%	17.5%	0.27
Global 60/40 Portfolio	8.0%	8.3%	0.53
10% Commodities & 90% 60/40	8.0%	8.0%	0.56

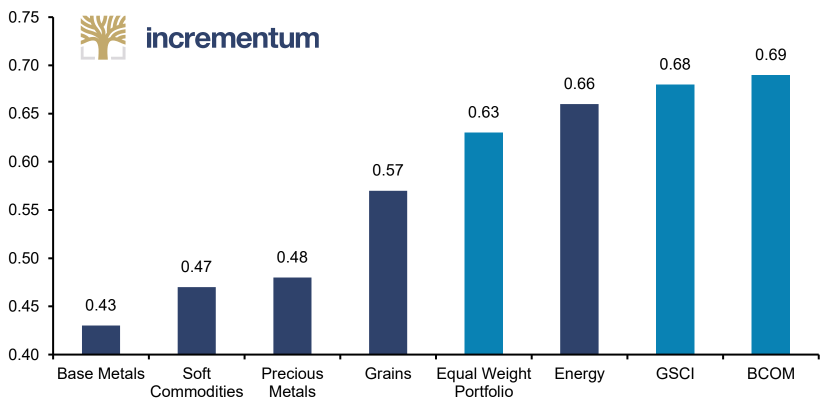
Source: AQR, Incrementum AG

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

Other scientific studies also come to the same conclusion. The study "Facts and Fantasies about Commodity Futures Ten Years Later" confirms the effect of commodities as a hedge against inflation, while stocks, bonds and even real estate are generally negatively correlated with inflation. In the period studied, since 1959 only commodities showed a positive correlation with the inflation rate, making them the only real inflation hedge.

What is interesting here is that different commodities provide a hedge against different types of inflation. Industrial metals perform well in demand-driven inflation; the energy sector naturally does well when inflation is driven by energy costs; while gold and silver perform best when the credibility of central banks and the banking system is challenged.

Inflation Sensitivity, 01/1972-12/2021



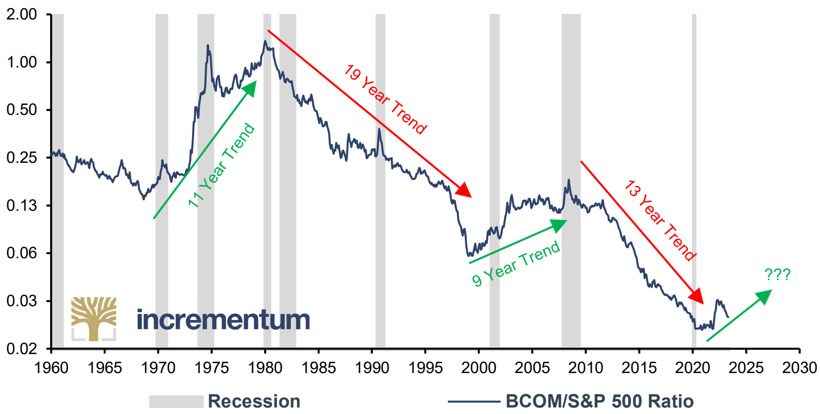
Source: Reuters Eikon, Incrementum AG

Accordingly, a commodity allocation offers investors three potential advantages:

- Positive returns in the long term
- Low correlations to equities and bonds
- Hedge against inflationary pressure

Let's now look at the relative performance of stocks and commodities. In the next chart, the major commodity supercycles are clearly visible. First, the Nifty-Fifty bubble in the early 1970s, the bursting of which, together with major geopolitical and especially monetary changes, led to an 11-year uptrend in commodities and gold. This was followed by almost two decades of underperformance in commodities, which was ended by the great technology bubble. Then came 13 years of outperformance of equities versus commodities and gold, culminating in the Everything Bubble.[11] We strongly believe that the bursting of the Everything Bubble will now lead to a prolonged period of outperformance of commodities and gold versus equities and bonds.

BCOM/S&P 500 Ratio, 01/1960-05/2023

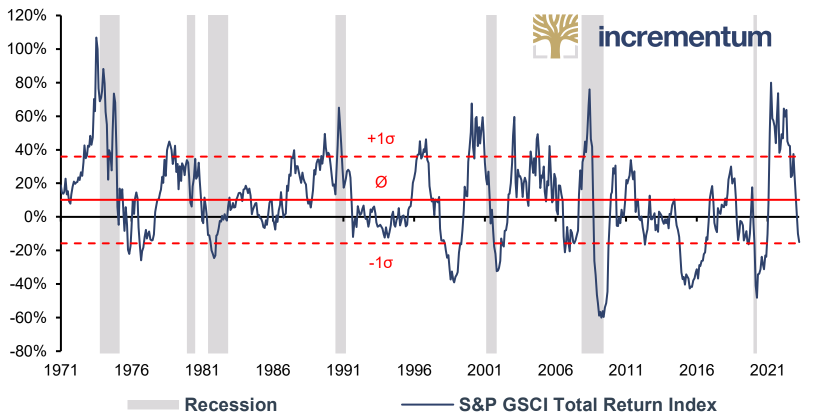


Source: Stifel Research, Reuters Eikon, Incrementum AG

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

While commodities rallied in the first half of the previous year, they then took a breather. This can also be seen in the next chart. Currently, it seems as if the overbought situation has been completely diminished and the excessive optimism has been priced out. This could therefore mean a solid setup for the next phase of the bull market.

S&P GSCI Total Return Index, yoy, 01/1971-05/2023



Source: Reuters Eikon, Incrementum AG

[11] *See* Stifel: "Gold – The Next Super Cycle Has Begun", Canada – Portfolio Strategy, February 16, 2023

Conclusion

At the start of this generational bond bull market, few believed it had begun. Today, few believe it has ended.
Kevin Muir

The current US banking crisis represents a deflationary event. Actually, it's a perfect environment for US bonds. But if you look at the performance of the TLT fund, which tracks long-dated US government bonds, it has hardly changed since December. The US dollar also tended to weaken during this phase. In this respect, we feel confirmed in our assessment that currently new safe havens are being sought after.

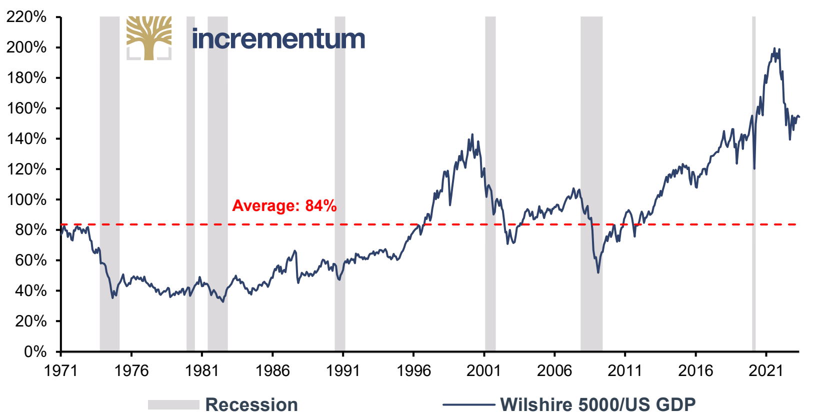
Gold (lhs), in USD, and TLT (rhs), in USD, 01/2003-05/2023

Source: Reuters Eikon, Incrementum AG

If the ratio approaches 200%...you are playing with fire.
Warren Buffett

In equity markets, valuations of many sectors and individual equities remain far from bargain levels. The Buffett indicator[12] , with a value of 153%, is still well above the long-term average of 84% but also well below the high of December 2021, when the indicator exceeded the level of 200% for the first time. However, in the value segment of the old economy as well as in emerging markets, we are increasingly finding interesting opportunities in equity markets.

Wilshire 5000/US GDP, 01/1971-05/2023



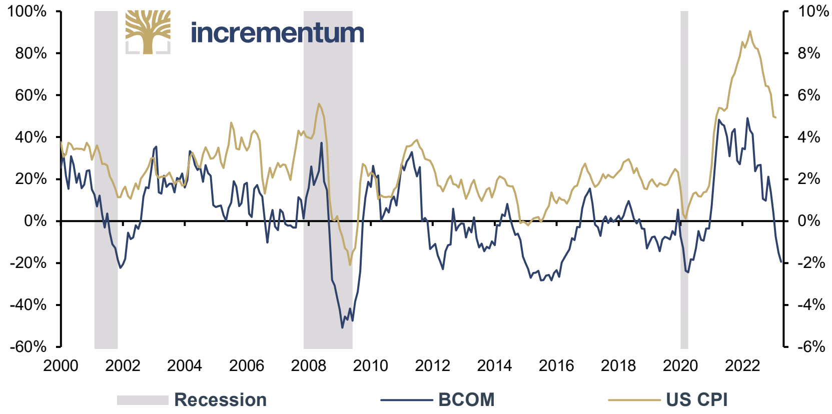
Source: Reuters Eikon, Incrementum AG

[12] The Buffett indicator is a valuation multiplier that compares the capitalization of the U.S. Wilshire 5000 Index to U.S. GDP.

Bear markets are the authors of bull markets, and bull markets are the authors of bear markets!
Rick Rule

In commodities, there is much to suggest that the secular bull market remains intact. In addition to the capex cycle, which we will discuss in detail later in this *In Gold We Trust* report, targeted decarbonization and ESG-compliant investing have become the structural drivers of supply and demand for many commodities. **We strongly believe that the commodity bull market has taken a healthy breather and could soon mark a new phase of the uptrend.**

BCOM (lhs), yoy, and US CPI (rhs, 2 Month Lag), yoy, 01/2000-05/2023



Source: Reuters Eikon, Incrementum AG

Status Quo of Debt Dynamics

History shows that once a nation has accumulated significant debt, there are only two ways to repay it: One is to simply declare bankruptcy – repudiate the debt. The other is to devalue the currency, destroying the prosperity of the common citizen.

Adam Smith

- **Thanks to two effects (high inflation and the base effect from the termination of Covid measures), nominal growth in 2022 was very high. This reduced debt/GDP levels.**
- **In 2023, these effects will no longer apply, and at the same time, inflation will become noticeable in budgets as an expenditure driver, through higher interest rates on government debt and higher (social) spending. As a result, inflation will no longer have a debt-relieving effect in the medium term.**
- **The tightening of monetary policy, if followed through as announced, would reduce demand for government bonds and would further increase pressure on yields.**
- **The geopolitical showdown has been reducing foreign demand for US government bonds for some time.**
- **In the US, a showdown on the debt ceiling is imminent. This showdown is made even more explosive by continuing very high budget deficits and the political polarization.**

Oh, what a feeling
When we're dancing on the ceiling.
Lionel Richie

In 1995, the US had its first political showdown over the debt ceiling. But unlike the countless previous increases – the debt ceiling had been raised 82 times since the end of World War II – this time it degenerated into a plaything of partisan interests, an expression of the deepening rift between the two political camps. The two protagonists: on the Democratic side, President Bill Clinton; on the Republican side, House Speaker Newt Gingrich. The Republicans had won both chambers of Congress in the November 1994 midterm elections. Bill Clinton was thus dependent on the approval of the Republicans. An agreement was finally reached in early August 1996. **At that time, in the first showdown, the US debt stood at USD 4.9 trillion, or 65% of GDP.**

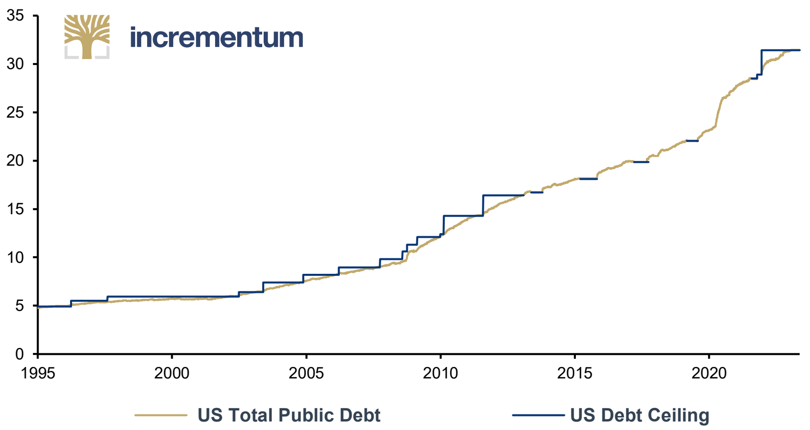
If we keep running deficits at this rate, we will need to think about what kind of debt burden we are going to leave for Keith Richards.
Kevin Muir

In 2011, the showdown was repeated. Democratic President Barack Obama faced Republican John Boehner, newly elected speaker of the US House of Representatives. The showdown was so fierce that the US, which was on the verge of default, lost its AAA rating three days after a political compromise was reached on Aug. 2, 2011, on a two-step increase in the debt ceiling. The downgrading by S&P led to "Black Monday" on the stock markets three days later. Around one month later, on September 6, 2011, gold marked a new all-time high of USD 1,920. **At that time, US debt amounted to around USD 16 trillion (94% of GDP) – three times as high as in 1995.**

I have one message for those observing or involved in the standoff over raising the US federal debt limit: Be afraid, be very afraid.
Bill Dudley

2023 will see a repeat of this showdown. Once again, the incumbent US president, Joe Biden, is a Democrat; once again, the new speaker of the House of Representatives is a Republican, Kevin McCarthy; and once again, the Republicans took over the House of Representatives from the Democrats in the 2022 midterm elections. **The national debt is now USD 31.4 trillion, or 121% of GDP.**

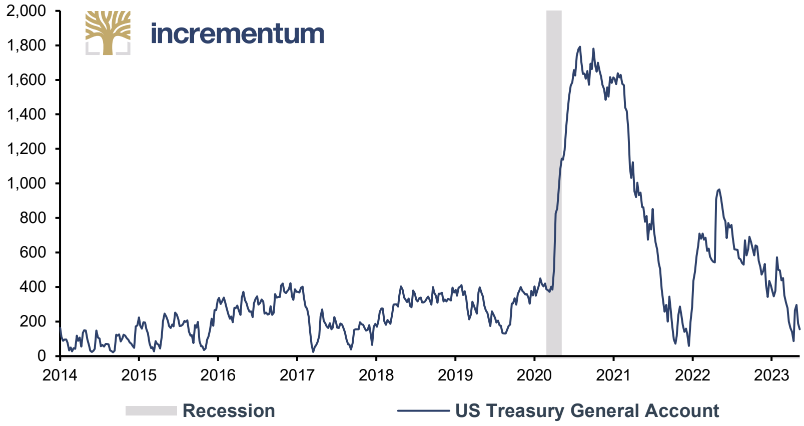
US Total Public Debt and Debt Ceiling, in USD trn, 01/1995-05/2023



Source: U.S. Department of the Treasury, Incrementum AG

Since January 19, 2023, US Treasury Secretary Janet Yellen has been driving a crisis course. *Extraordinary measures* have been set to reduce current government spending. Thanks to Washington's amply funded checking account at the Federal Reserve, the Treasury General Account (TGA), the fact that the debt ceiling was reached on January 19 has for now remained without consequences. However, the expected hardball political showdown has only been postponed, not cancelled. **In June, shortly after the publication of this *In Gold We Trust* report, it will finally be showdown time.**

US Treasury General Account, in USD bn, 01/2014-05/2023



Source: Reuters Eikon, Incrementum AG

Democrats and Republicans are like two bald men fighting over a comb. It's entertaining, but ultimately pointless.
Jorge Luis Borges

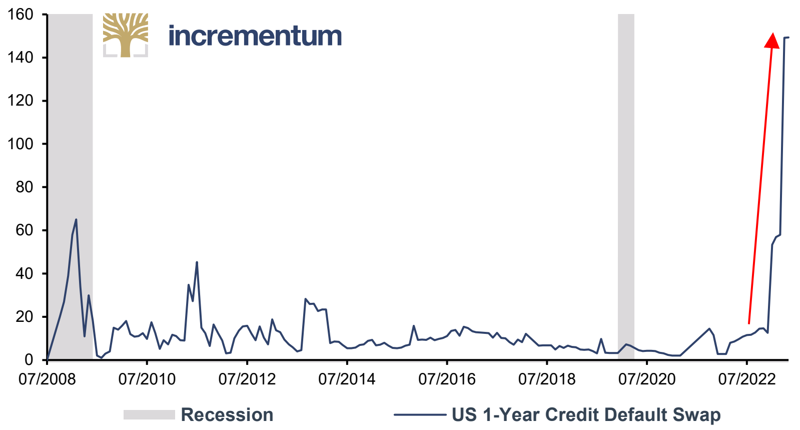
There is no doubt that the debt ceiling will be raised again. It would be the 79th increase since 1960, the 21st since 2000, and the 30th under a Democratic president, while under Republican presidents the debt ceiling has been raised 49 times. The only open question at the moment is what political compromises will have to be made to reach an agreement. After all, it is less than a year and a half until presidential and congressional elections are held again in the US, in a political atmosphere that is becoming increasingly heated and polarized.

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

A little interesting historical sidenote: The government under Dwight D. Eisenhower chose a special solution to prevent insolvency in 1953. The Federal Reserve' s balance sheet still contained gold whose valuation had not yet been revalued to the new parity of USD 35 per troy ounce of gold established in 1934. The Federal Reserve credited these profits from the monetization of gold to the account of the US Treasury. A total of USD 500mn was monetized in this way in early November 1953, thus preventing Washington's insolvency. In the spring of 1954, Congress finally raised the debt ceiling so that bond issuance could continue.

A more intense debate about a sovereign default by the US, would have far-reaching consequences for the global economy and for financial markets. In view of the looming geopolitical showdown, a US sovereign debt crisis would further damage the US's already shaken supremacy.

US 1-Year Credit Default Swap, 07/2008-05/2023



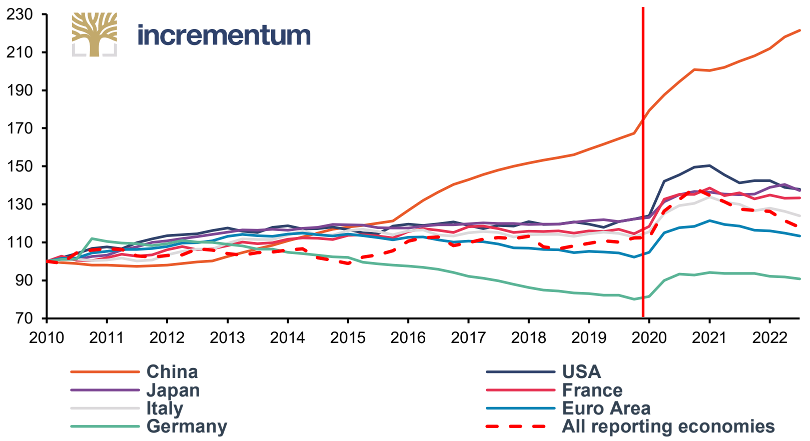
Source: Reuters Eikon, Incrementum AG

Appearances Continue to Be Deceptive When It Comes to Government Debt

Reality is easy. It's deception that's the hard work.
Lauryn Hill

"Appearances are deceptive" – this is how we opened this chapter in the *In Gold We Trust* report 2022. And this line remains equally true in 2023. At first glance, the situation regarding government debt eased noticeably in 2022; but, as last year, that was only at first glance. Once again, government debt ratios declined. Notable exceptions were China and Japan, where debt increased by 5.6 and 3.8 percentage points respectively.

Public Debt, as % of GDP, 100 = Q1/2010, Q1/2010-Q3/2022



Source: Reuters Eikon, Incrementum AG

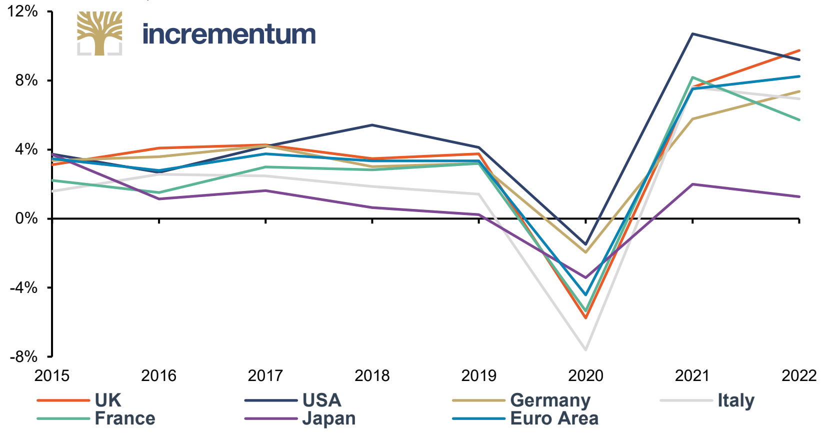
Once again, however, this decline in most countries was not due to sustained consolidation of government budgets but, as in 2021, to exceptionally strong growth in nominal GDP. 2022 was the second – and last – year for government debt in most leading economies to be positively impacted by Covid-related effects.

Two special factors are responsible for this. First, 2022 was marked by economic normalization after the pandemic. This base effect[13] due to the lifting of

[13] See "The Status Quo of Debt Dynamics," *In Gold We Trust* report 2022

measures will disappear completely in 2023, with the notable exception of China, which in a radical about-turn only abandoned its restrictive “zero Covid” policy in January. Nominal economic growth rates in 2022 were impressively high, well above the long-term average. As we will see, however, this only *temporarily* reduces public debt ratios.

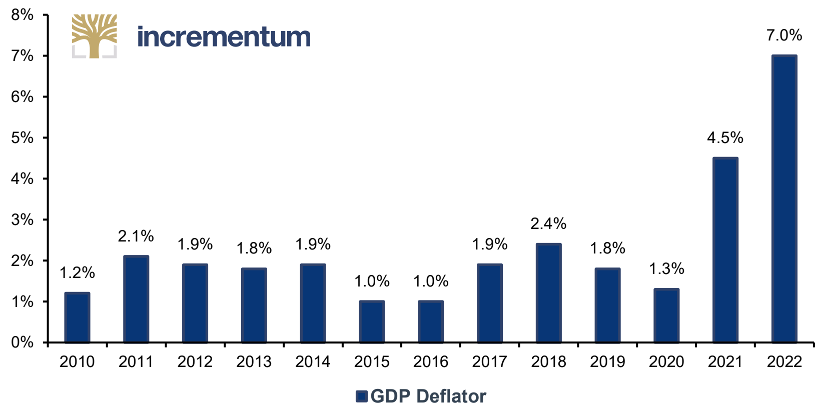
Nominal GDP Growth, UK, USA, Germany, Italy, France, Japan, Euro Area, 2015-2022



Source: Reuters Eikon, Incrementum AG

The second factor pushing up nominal GDP growth in 2022 was high inflation. At 7.0%, the GDP deflator[14] for the USA in 2022 was markedly higher than in the low-inflation years before 2021, following an already impressive 4.5% in 2021.

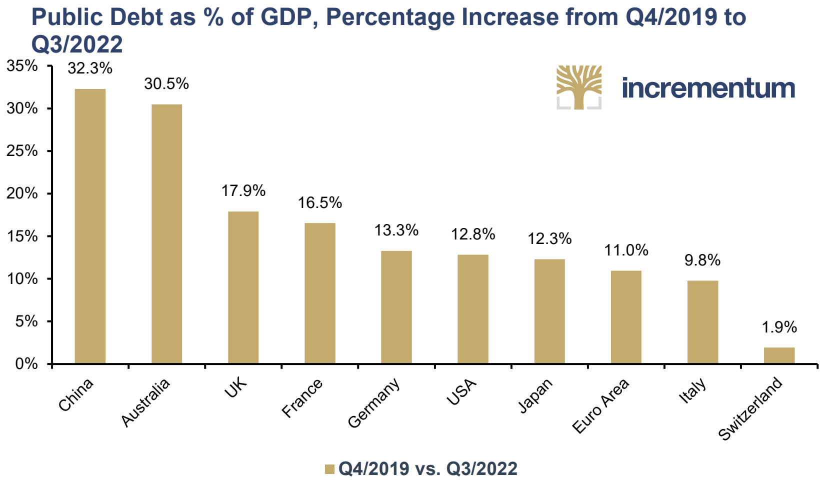
GDP Deflator, USA, 2010-2022



Source: BEA, Incrementum AG

However, it would not only be premature to sound the all-clear on the sovereign debt front, it would be completely wrong. Politically exploited appearances are deceptive. Compared with the pre-Covid era, public debt as a percentage of GDP is still significantly higher.

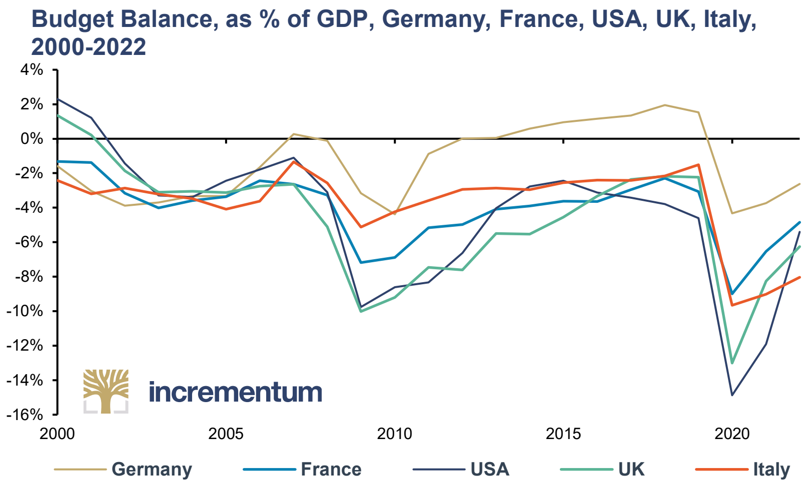
[14] In contrast to common inflation concepts such as CPI, PCE, or HICP, the GDP deflator captures the price development of all GDP-relevant goods and services, not only that of consumer goods.



Source: Reuters Eikon, Incrementum AG

I think the Bayern coach is the second hardest job in Germany, after the Chancellor.
Juup Heynckes

This is not surprising, given that the rigorous measures to combat the coronavirus have noticeably impaired economic growth and caused government spending to skyrocket. Germany, admittedly a negative example, achieved just about the same real GDP at the end of 2022 as it did at the end of 2019. And despite bubbling tax revenues due to inflation, states have not managed to get their deficits under control.

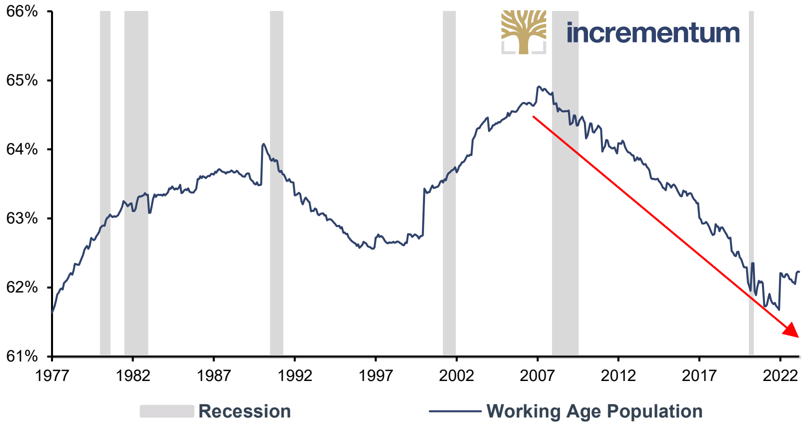


Source: Reuters Eikon, Incrementum AG

This would be a much better world if married couples were as deeply in love as they are in debt.
Earl Wilson

Government debt ratios are not only coming under pressure from secular developments such as demographic change. In more and more countries, work force potential is declining and with it the share of the population that is productively active and whose current income can thus be taxed to cover government spending. At the same time, the aging of society is leading to higher healthcare and pension expenditures, especially if the retirement age is not or only insufficiently adjusted to higher life expectancy. However, economic developments in recent years apart from the Covid period are also putting a strain on government finances. This strain is in part still hidden, in part creeping, in part only in the initial stages.

Working Age Population (Aged 15–64), as % of Total Population, USA, 01/1977-03/2023



Source: Federal Reserve St. Louis, Incrementum AG

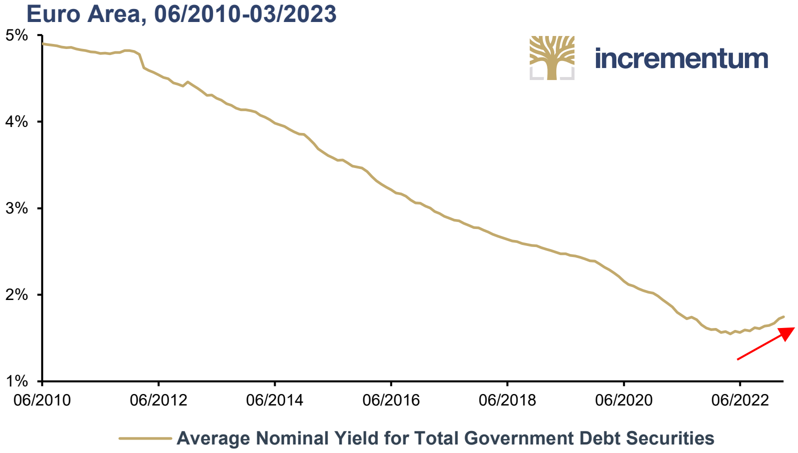
Pressure on public finances increases

Higher interest payments as a result of the significant increase in yields

Interest rates are like relationships; when they're low, everyone wants to get in on the action, but when they're high, you start questioning your life choices.
Unknown

Extremely low interest rates in recent years, coupled with the voluptuous government bond purchase programs of the central banks gradually pushed down the interest burden on governments in the 2010s. This freed up considerable amounts in government budgets for other spending purposes. **The time of these special dividends to the state is now over. The average interest rate on government debt is now already on the rise, albeit at a still very low level of increase.**

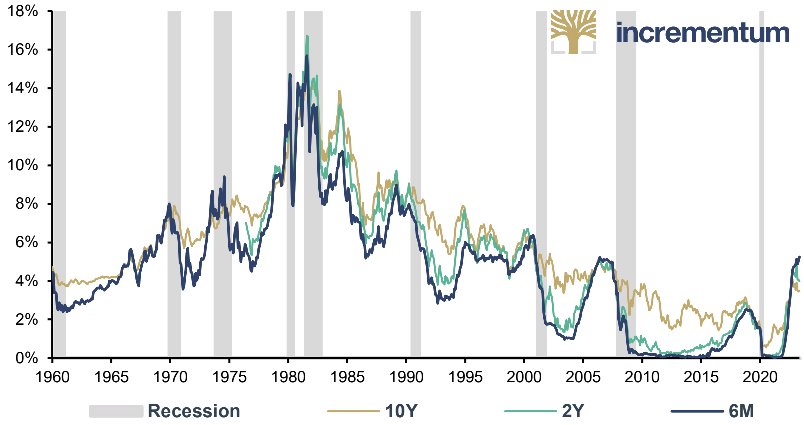
Average Nominal Yield for Total Government Debt Securities, Euro Area, 06/2010-03/2023



Source: ECB, Incrementum AG

This trend reversal, which has so far been slight, is likely to accelerate rapidly and become a burden for government budgets. Less than two years ago, the yield on the 10-year US Treasury was around 0.5%. Less than a year ago, in the summer of 2022, it was around 1.2%. That still represented an increase of almost 150%. In mid-October 2022, the 4% mark was reached for the first time since October 2008. Calculated from the low point at the beginning of August 2020, this is an eightfold increase. Until mid-May the yield eased again to 3,6%.

US 10Y, US 2Y, and US 6M Government Bond Yield, 01/1960-05/2023

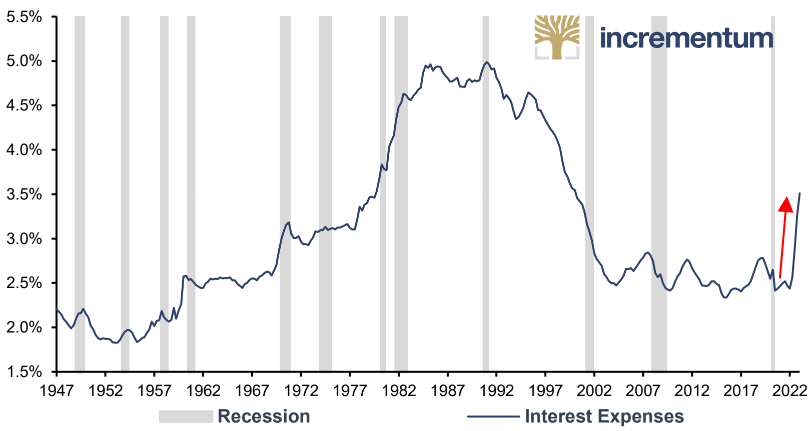


Source: Reuters Eikon, Incrementum AG

Mountains are not fair or unfair, they are just dangerous.
Reinhold Messner

And for finance ministers, who in recent years have only walked on the flat because of the low interest rates, these hills are *relatively* ambitious mountain tours despite the *absolutely* low altitude. Just as a hiker who starts his tour on an island at sea level sometimes covers more vertical meters than a hiker in the Alps who starts his mountain jaunt already at 1,500 meters elevation.

Interest Expenses, as % of GDP, USA, Q1/1947-Q1/2023



Source: Federal Reserve St. Louis, Incrementum AG

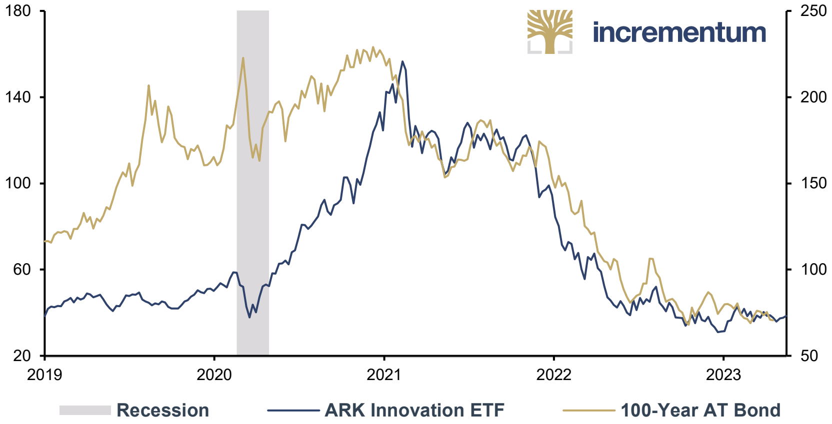
To ease the burden on sovereigns, central banks could soon use the instrument of yield curve control (YCC).[15] The BoJ has already been using this instrument since 2016. The fact that the interest rate cap was raised from 0.25% to 0.50% on December 20, 2022, in a move that surprised everyone, does not change this. The swelling of the BoJ' s balance sheet to a new record level in February 2023 is therefore hardly surprising.

Those who eagerly bought the two issues of 100-year Austrian government bonds are currently suffering a little lesson in duration risk. As a reminder, Austria issued two 100-year bonds, in 2017 and 2020, with

[15] *See* "The Status Quo of Debt Dynamics," *In Gold We Trust* report 2022; "Yield Curve Control, the Biggest Mistake of the ECB So Far! – Exclusive Interview with Russell Napier," *In Gold We Trust* report 2021

coupons of 2.100% (2017) and 0.850% (2020). Both bonds were heavily oversubscribed. Both bonds are currently well below their respective highs of 247.64 and 138.46 and, at around -30% and -60% respectively, also well below the issue price. The slump is strongly reminiscent of the price slide in technology stocks, which are also extremely sensitive to interest rates.

ARK Innovation ETF (lhs), and 100-Year AT Bond 2017 (rhs), in %, 01/2019-05/2023

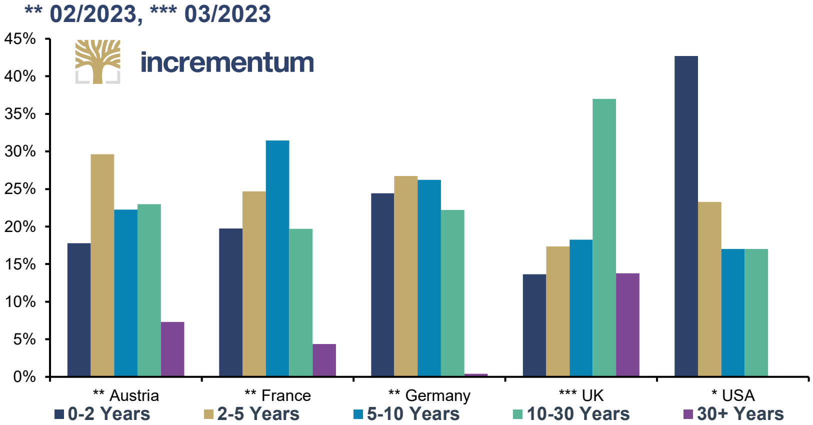


Source: Frankfurt Stock Exchange, Reuters Eikon, Incrementum AG

Bond maturity gives finance minister sleepless nights

The speed at which the rise in bond yields feeds through to budgets depends on both continuing fiscal discipline and on the residual maturity of existing debt. This varies quite considerably from state to state.

Marketable Government Debt by Maturity, in % of Total, * 01/2023, ** 02/2023, *** 03/2023



Source: OeBFA, Bundesrepublik Deutschland – Finanzagentur GmbH, Agence France Trésor, UK Debt Management Office, U.S. Department of the Treasury, Incrementum AG

The US is as far from a balanced budget as Joe Biden is from puberty.
***In Gold We Trust* report 2022**

For the federal budget of the USA, the refinancing requirements in the coming years represent a considerable burden. According to calculations by Horizon Kinetics, the USA will have to refinance half of its national debt of more than USD 35trn by 2025. Should the financing and refinancing succeed at an average rate of 4.4% and the remaining interest on the national debt remain at around 2.4%, the interest service would more than double to USD 1.2trn by 2025. 25% of federal tax revenues would go to interest service alone in this scenario, which would be historically unprecedented. This would be equivalent to nearly 4.4% of GDP.[16] This estimate is significantly higher than the CBO's 3.6%.

[16] Horizon Kinetics: "4th Quarter Commentary – January 2023", January 2023

Maturity of US Debt

Maturity	Years to Maturity	Running % Maturities of All Outstanding	Weighted Avg. Maturity Cumulative
01/2024	1	30.0%	0.3
01/2025	2	42.5%	0.5
01/2026	3	51.7%	0.8
01/2027	4	59.0%	1.1
01/2028	5	65.9%	1.5
01/2029	6	71.3%	1.8
01/2030	7	75.3%	2.1
01/2031	8	80.5%	2.3
01/2032	9	80.7%	2.5
01/2033	10	82.9%	2.8
02/2043	20	87.5%	4.1
11/2052	30	100.0%	7.2
Total Amount Outstanding at 12/31/2022 (in USD mn):		238,001,119	7.2

Source: Horizon Kinetics, Incrementum AG

In exceptional cases, even today the current-issue yield of new issues and stock-up of existing bonds is lower than the interest on maturing bonds. This is the case for all bonds whose original maturity – depending on the country – was at least 10 to 15 years. Some Italian bonds, for example, still fall into this category.

Italy is a country where even the pigeons walk around with style and flair. It's contagious!
Andrea Pirlo

However, Italy also has significant refinancing needs in the coming years. While the average maturity of Italian debt is around seven years, the median maturity – the point at which half of the outstanding debt falls due – is around five years. In view of the high refinancing needs and the associated burden on government budgets, it is more than questionable whether the ECB will stand idly by and watch a sharp rise in yields and, especially, spreads. After all, the Club Med countries have a majority on the ECB Governing Council.

The EU reached an agreement – except it was the kind of agreement only the EU can reach; an agreement about which everybody involved disagrees.
Grant Williams

Relief is coming for Italy and all economically weak EU countries from the NextGenEU fund**, the Covid crisis-management fund fed by EU-wide debt borrowing.** Non-repayable grants amounting to 1% of GDP will flow to Italy until 2023. In addition, Italy will receive soft loans of roughly the same amount. But of course, these grants will have to be financed. Clemens Fuest, president of the ifo Institute, estimates that NextGenEU will increase the government debt ratio in the EU by 5.5 percentage points.

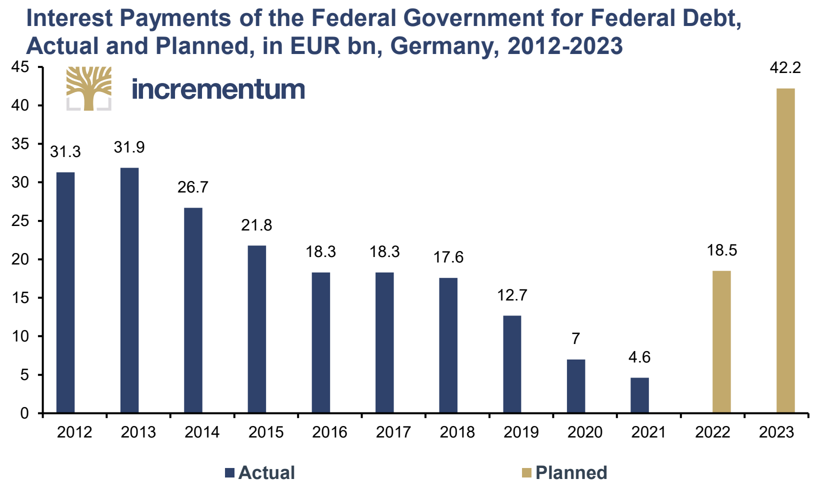
Inflation-indexed bonds as a fiscal own goal

Obviously, the rise in interest rates has had a large impact on inflation-indexed bonds , whose coupons are linked to the inflation rate. In Germany, Finance Minister Christian Lindner calculated already in the summer of 2022 that interest payments on Germany' s inflation-indexed bonds would be around EUR 7.6bn in 2023. That is EUR 3bn more than last year and almost EUR 7bn more than in 2021, meaning that interest expense would have increased roughly tenfold in three years . Although inflation-indexed bonds account for only

5% of total German bond holdings, 25% of total German interest payments on government debt are now incurred for this type of bond.

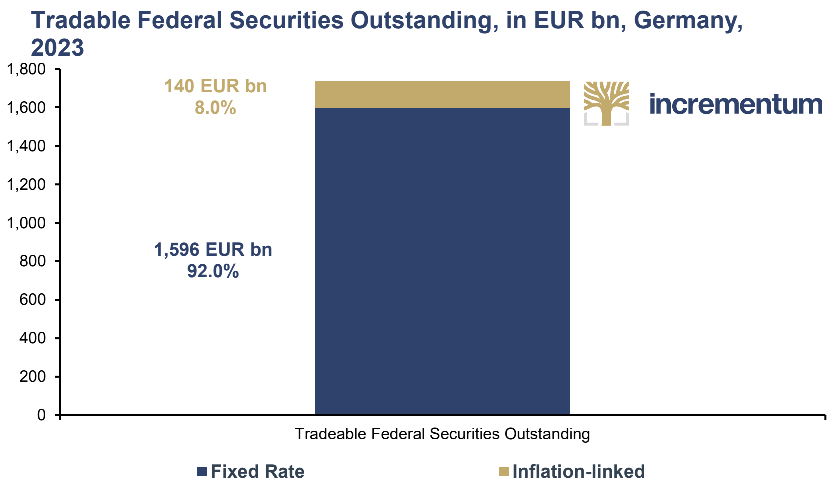
Poor old Germany. Too big for Europe, too small for the world.
Henry Kissinger

But this estimate is likely to prove far too low. For at the end of February, Finance Minister Lindner once again shocked the public. He announced his estimate that in the current year the interest service on the federal government's debt is likely to increase almost tenfold to around EUR 40bn within just two years. In the summer of 2022, Lindner had still assumed an increase to "only" EUR 30bn. Interest service should thus account for more than 8% of all federal spending in 2023, compared with just 0.7% in both 2020 and 2021. After all, the yield on the 10-year federal bond was still -0.27% in January 2020 and was quoted at just below 2.60% at the end of February 2023. In relative terms, however, spending on interest service was higher until 2014, and even in the double-digit percentage range in 2013.



Source: Bundesministerium der Finanzen, Incrementum AG

The following chart shows the share of inflation-indexed bonds in the total bond portfolio.



Source: Federal Republic of Germany - Finance Agency GmbH, Incrementum AG

USA: No budget consolidation in sight

It's clearly a budget. It's got a lot of numbers in it.
George W. Bush

For the US, the Congressional Budget Office (CBO) warned as early as November 2022 that the US deficit in 2023 was likely to be 20% to 30% higher than in the May 2022 forecast, and for 2024 the deficit could exceed the old May 2022 estimate by as much as 46%.

For 2023, a budget deficit of around USD 1.5trn or approx. 5.8% of GDP is now expected, after 14.9% (2020), 11.9% (2021) and 5.5% (2022). At 5.5%, last year's budget deficit was almost 2 percentage points or more than 50% higher than the average of the past 50 years.

We could say the government spend like drunken sailors, but that would be unfair to drunken sailors, because the sailors are spending their own money.
Ronald Reagan

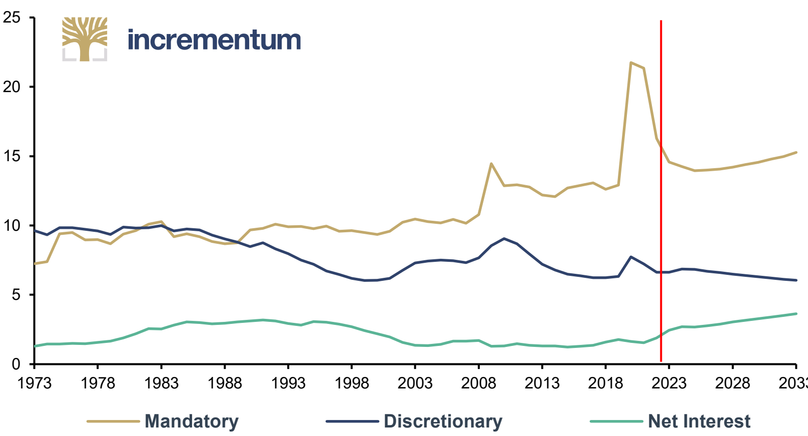
And the accounting for the first few months of the fiscal year, which runs from October 2022 to September 2023, suggests that CBO' s fears of USD 1.4trn in new debt are on the optimistic side. This is because, in the first six months of fiscal year 2023 (October-March), the US federal budget already posted a deficit of USD 1.1trn. That's up USD 431bn, or 64%, from a year earlier. Before the Covid pandemic, the USD 1trn mark was still considered the limit that must not be exceeded. It has now been easily broken after half a year.

The following calculations by the CBO show how tight the fiscal situation in the US is. For 2033, the CBO expects a budget deficit of 7.3% or USD 2.9trn. **In order to be able to present a balanced budget in 2033, all expenditures excluding interest payments would have to be reduced by 35%.**

The budget was unlimited, but I exceeded it.
Donald Trump

The combination of high budget deficits, which will continue to swell to 6.9% and beyond, and higher interest rates will cause interest service as a percentage of GDP to rise markedly in the coming years. Compared with today, CBO projects that it will nearly double over the next 10 years. Finally, CBO projects that the United States will run significant primary deficits of at least 2.5% by 2033. **For the full 10-year period through 2032, the CBO raises the estimate for the cumulative budget deficit to USD 3.1trn, 20% higher than in the May 2022 forecast.**

Outlays by Category, as % of GDP, USA, 1973-2033

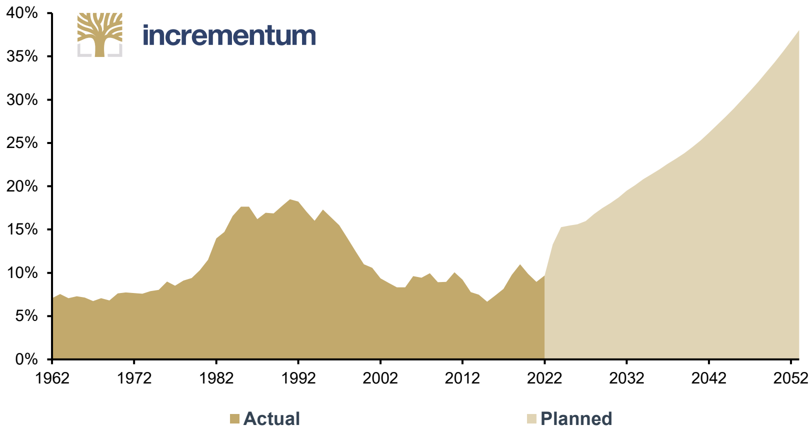


Source: CBO, Incrementum AG

What if I say I'm not just another one of your plays?
You're the pretender.
Foo Fighters

The figures are even more worrying if interest service is referred to tax revenues rather than GDP. Although referring to tax revenues is not common, it is economically and fiscally appropriate. After all, referring to GDP assumes, on the one hand, that the government has a claim on all economic output. On the other hand, it pretends that ever higher taxation – as a result of rising interest service – has no impact on the population's eagerness to work and thus on GDP.

Interest Expenses, as % of Tax Revenues, USA, 1962-2053

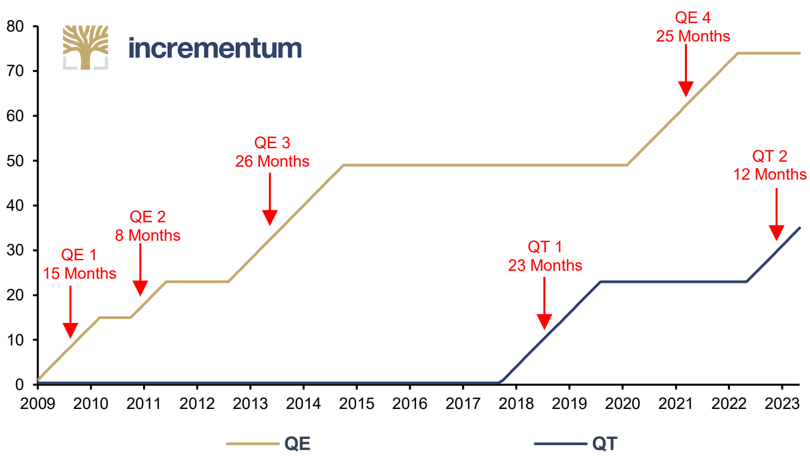


Source: CBO, Incrementum AG

The tightening of monetary policy puts a strain on government budgets

With the onset of unconventional monetary policy, central banks increasingly acted as buyers of government bonds over the past 15 years, through various QE rounds.

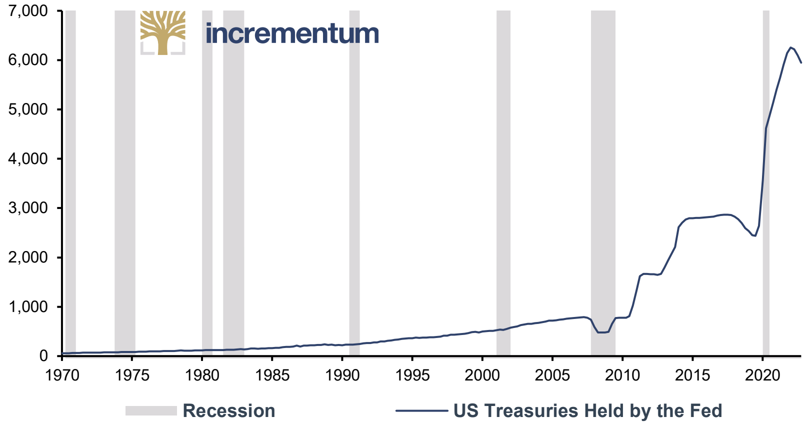
QE vs. QT, in Months, 01/2009-05/2023



Source: Reuters Eikon, Incrementum AG

The volumes purchased were so extensive that this additional demand undoubtedly had a dampening effect on government bond yields. The Federal Reserve estimates that the QE programs may have depressed the yield on 10-year US Treasuries by 100 basis points.

US Treasuries Held by the Fed, in USD bn, Q1/1970-Q4/2022



Source: Federal Reserve St. Louis, Incrementum AG

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

Courtesy of Hedgeye

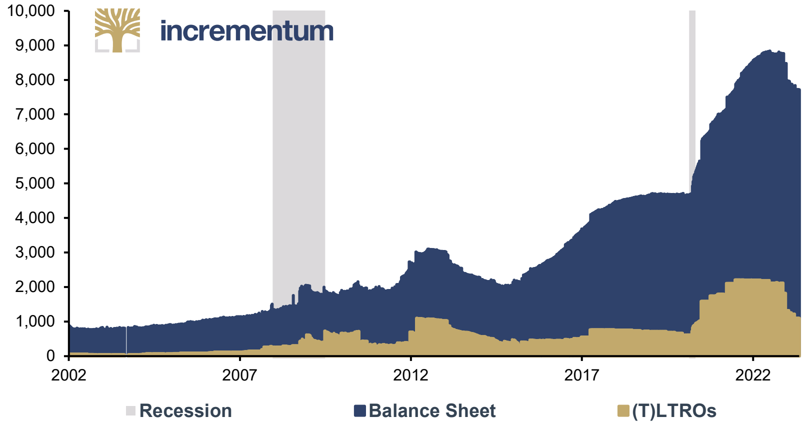
Alongside interest rate hikes, the reduction of central bank balance sheets represents the second major instrument of monetary policy tightening. After central banks stopped expanding their balance sheets in 2022 as the first step of the normalization process, the second step was *QT light*, the *passive* shortening of the balance sheet by not fully reinvesting maturing bonds. The Federal Reserve has practiced *QT light* since June 2022, and to a greater extent since September 2022. The ECB, again the latecomer, has been at it since March 2023.

As a further tightening of the tightening policy, so to speak, *QT heavy* , the outright sale of government bonds, would be available as an instrument – at least in theory. This *active* contraction of the balance sheet would be the exact mirror image of the outright purchase of government bonds in the context of the unconventional monetary policy measures that have been ongoing for more than a decade and have now become conventional. After all, there is nothing more permanent than a stopgap measure. Or to put it another way, the state of crisis has become the norm. The fact that there was once a time when central banks merely took government bonds onto their books temporarily as collateral for what was usually a two-week repo transaction sounds like a tale from a bygone era.

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

One special feature should not go unmentioned at this point. The decline in the Eurosystem's balance sheet total by around 1 trillion euros to slightly less than 8 trillion euros should not be overlooked. The 8 trillion is almost exclusively attributable to the expiration or early repayment of targeted longer-term refinancing operations (TLTROs) by commercial banks.

ECB Balance Sheet, and (T)LTROs, in EUR bn, 01/2002-05/2023



Source: ECB, Reuters Eikon, Incrementum AG

One of the tests of leadership is the ability to recognize a problem before it becomes an emergency.
Arnold H. Glasgow

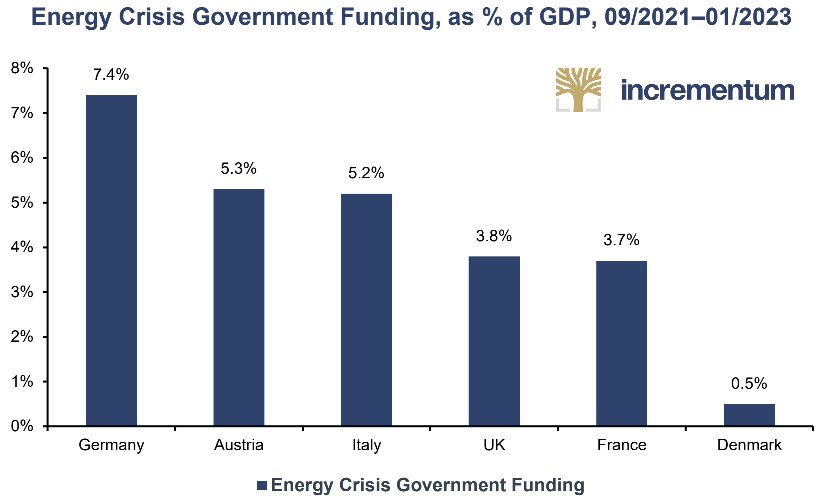
While LTROs were originally limited to a term of three (and a maximum of 12) months, this was extended to three years in 2011 in the wake of the euro debt crisis, in order to stabilize the banking sector. Unflatteringly, this striking extension of the term was given the catchphrase "Big Bertha", originally the designation for a German World War I howitzer. Starting in 2014, the LTROs were adjusted to explicitly encourage banks to lend to the public, hence *targeted* longer-term refinancing operation.

Energy price and inflation control as the next fiscal burden

The extreme fiscal efforts to combat the Covid-19 pandemic will be followed by the next surge in spending with the support payments to combat inflation[17] and high energy prices as well as the inflation indexation of pensions and social spending, newly introduced in some countries. According to IMF calculations from December 2022, the additional spending on support measures for private households in Europe for the years 2022 and 2023 already adds up to appreciable amounts: UK: 5.1%, France: 4.3%, Austria: 4.1%, Italy: 2.8%, Germany: 2.5%

If we consider all the support measures for private households *and* companies, we are already moving into much higher dimensions.

[17] For an overview of measures taken in the first half of 2022, see Amaglobeli, David et al: "Policy Responses to High Energy and Food Prices," IMF Working Paper No. 2023/074, March 24, 2023, pp. 17f., Annex II-IV



Source: Bruegel, Incrementum AG

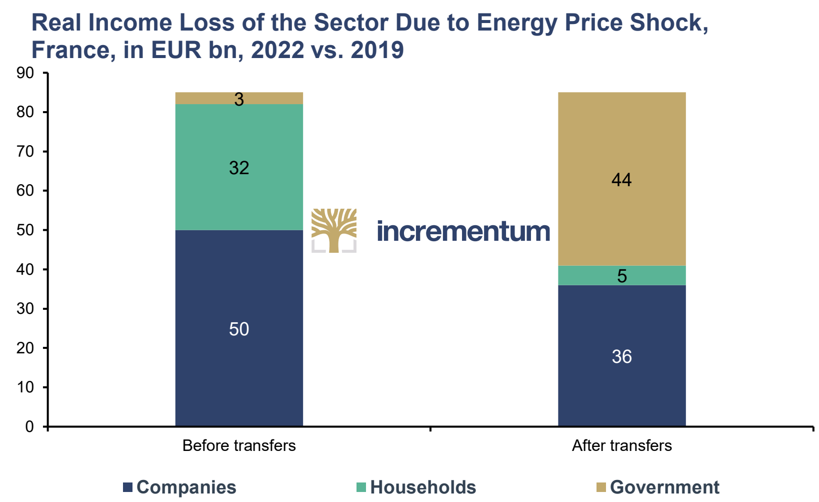
Down down deeper and down,
Get down deeper and down.
Status Quo

In view of the rather warm winter of 2022/2023, these figures are likely to be lower in the end, possibly even significantly lower. **Nevertheless, it looks as if the governments – and their voters – have lost all fiscal responsibility and prudence.**

Left pocket, right pocket

On the heels of the support programs to cushion the economic turmoil caused by the Covid measures, the sharp rise in energy prices since the summer of 2021 has once again led to significant discretionary support payments that are straining government budgets.

The highly diverse measures (direct financial support to households and companies, price caps, temporary reduction or suspension of taxes and levies on energy sources, assumption of energy costs by the state) have shifted the financial burden significantly, from households and companies to the state.



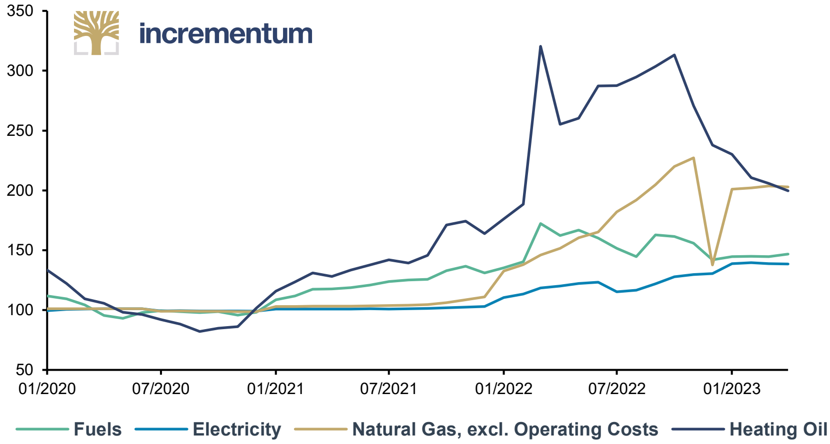
Source: DG Tresor calculations, Clavères (2022), Incrementum AG

But, of course, the economic principle applies: No one can escape this showdown with reality. And so, too, the state can only spend what it has previously taken from private households and companies as a tax or will take from them as a tax in the future. In the end, it will always be the citizens and companies who must bear the prices and thus the costs overall, either through higher taxes or through spending cuts. The interim solution of the state is just that, an interim solution.

I' m sure: Bill Gates or Steve Jobs wouldn't even have gotten permission for a wall socket in a German garage.
Vince Ebert

These measures also have a temporary dampening effect on the inflation rate, namely whenever government intervention reduces prices for consumers. In Germany, for example, there was the 9-Euro Ticket in the summer of 2022, which allowed people to use local public transport for EUR 9 a month. The German Institut für die Wirtschaft calculated that because of this and numerous other government price interventions, the inflation rate was immediately 2 percentage points lower in June 2022, the first month the 9-euro ticket was valid. Administrative prices fell by 4.2% in that month, while all other goods increased by 10.2%. The one-off takeover of the cost of gas and heat by the federal government caused prices for natural gas and district heating to fall by almost 40% for consumers in December 2022, thus putting marked downward pressure on the inflation rate in Germany.

Price Indices for Energy Products, Germany, 100 = 01/2020, 01/2020-04/2023



Source: Statistisches Bundesamt (Destatis), Incrementum AG

Sleight of hand and twist of fate.
U2

These measures are just another political sleight of hand. After all, one year after the expiration of a measure that had a temporary dampening effect on inflation, the inflation rate will be higher by the same amount due to this artificially induced base effect. **Postponed is not canceled.**

High energy prices impact economic growth

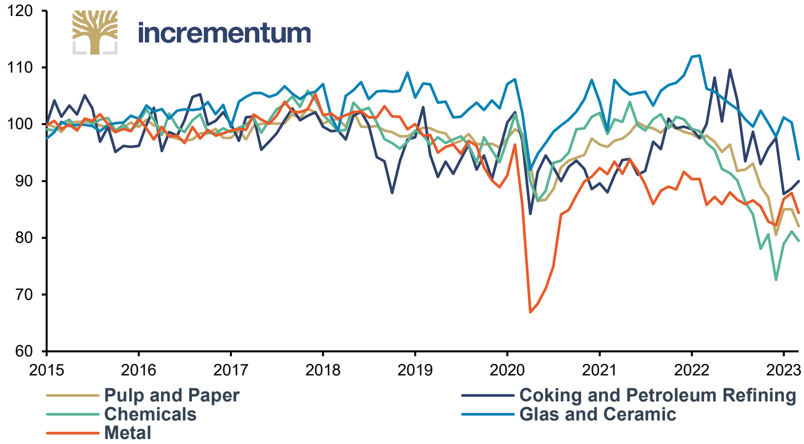
It's not easy being green!
Kermit the Frog

Europe in particular, and especially Germany, is suffering from the rise in energy prices exacerbated by the sanctions and counter-sanctions. However, the politically desired increase in the cost of energy due to the energy turnaround – key words: CO_2 certificates, CO_2 levy and the switch to renewable energies – and its bungled implementation are also making a not insignificant contribution to further worsening this competitive disadvantage. BASF, one of Germany's most important major companies, has announced not only job cuts in Germany but also the closure of several plants. **Explicitly cited as a reason for this decision are the high energy prices.**

This does not just mean short-term upward price surges, but rather an even higher electricity price in the long term, especially in comparison with other locations. The assessment of Bundestag Vice President Katrin Göring-Eckhardt of the

German governing party *Die Grünen* that the price of electricity will fall in the medium term after the nuclear phase-out can only be described as economically daring.

Production Indices of Energy-Intensive Industries, Germany, 01/2015-03/2023



Source: Statistisches Bundesamt (Destatis), Incrementum AG

If Germany were a stock - I would buy it.
Robert Habeck

The following quote from Robert Habeck, economics minister and Green Party colleague, shows how shaky industrial policy is at present. In the fall of 2022, he explicitly pointed out that Germany needed "a bit of luck with the weather" to get through the winter in good shape. In the long run, however, this economic policy based on hope might suffer a major shipwreck.

However, lower growth means lower tax revenues and higher spending on social benefits, even though the structurally very tight labor market – keyword, demographic change – means that unemployment is not expected to rise as in earlier times.

Subsidy competition for *green* technologies: Inflation Reduction Act (IRA)

But what does it say about an enlightened industrialized nation when forms of energy are divided into "good" and "evil," when risks are assessed according to gut feeling rather than on the basis of solid statistics, or when scientific evidence is referred to only when the findings fit the bill?
Vince Ebert

Politicians on both sides of the Atlantic have taken the Ukraine war as an opportunity to push ahead with the green transformation of the economy. Because of the quasi-religious motivation that sometimes prevails, the guiding principle is: whatever the cost. A key element of this transformation is the transition toward sustainable forms of energy. Particular attention is being paid to wind and solar energy. In addition, after heated and controversial discussions, the EU Commission has classified gas and nuclear power plants as climate-friendly.

Fierce subsidy competition to attract companies to this area has broken out specifically between the US and the EU. The trigger for this debt-driven competition was the passage of the US Inflation Reduction Act, which went into effect on August 16, 2022. 86% of the USD 430bn package is earmarked for climate protection and energy security.

As a result, alarm bells began to ring in Brussels. After all, the energy turnaround in Europe is not only supposed to have the goal of reducing CO_2 emissions in energy generation. For the German "traffic light" coalition government, renewables play a particularly central role due to the rejection of nuclear energy and the scarcely available hydropower capacities. Wind energy is to be expanded rapidly. In a political bid to outbid the government, German Chancellor Olaf Scholz has issued the goal – devoid of any anchoring in reality – of putting five new wind turbines into operation every day.

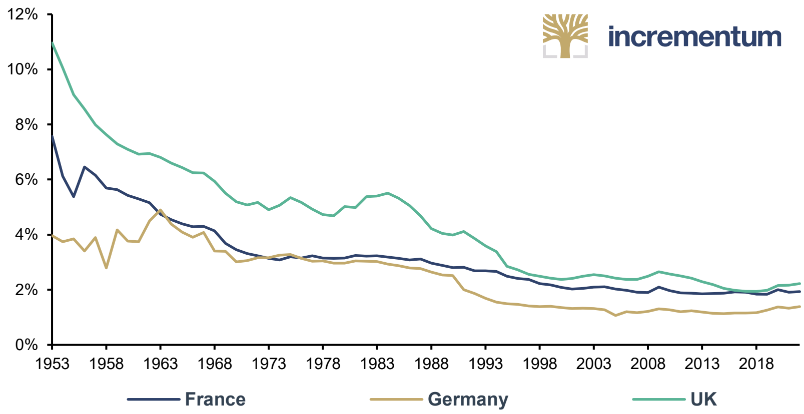
The first three words a child learns today: father, mother, subsidy.
Dr. Hannes Androsch, former minister of finance, SPÖ

Against this backdrop, the EU Commission wants to relax EU rules on public investment and provide more EU funding to promote clean technologies. This is also intended to prevent one dependency, i.e. on Russia, from being exchanged for another dependency, i.e. on China, as a result of the energy transition. After all, China is currently by far the most important producer and processor of raw materials needed for the energy transition.

Cost of military buildup

When the Berlin Wall fell in 1989 and Francis Fukuyama proclaimed the "End of History", the so-called peace dividend was paid out for decades. Defense spending, which had already been in almost constant decline in the preceding decades, slipped once again. From just over 4% to below 2% of GDP in the UK, from 2.5% to just 1.1% (2015) in Germany, and from 2.9% to as low as 1.8% in France. A significant increase is expected to have occurred in 2022.

Military Expenditures, as % of GDP, 1953-2022



Source: SIPRI, Incrementum AG

With the outbreak of the Ukraine war on February 24, 2022, the era of the peace dividend in Europe appears to be coming to an end – and with it the relief it brought to national budgets. At the very least, there are countless declarations to significantly increase defense spending in the future. However, even most NATO countries have so far failed to meet the 2% target they set themselves. Higher defense spending will naturally put a strain on national budgets for a longer period of time, possibly even significantly. Germany, whose defense spending is currently only around 1.3% of GDP, has chosen a special way to achieve this. The decided one-off additional spending on rearmament, amounting to EUR 100bn – roughly twice current defense spending – will not be covered by the ordinary budget. Instead, a further special fund (dt. "Sondervermögen") will be set up in addition to the 27 existing ones. For this special fund, the Basic Law was even amended in June 2022 to exempt it from the constitutionally required debt brake.

However, an increase already seems to be necessary. Senior military officials, for example, criticize that the EUR 100bn will not be enough to achieve the intended goal of strengthening the Bundeswehr's alliance and defense capability. In addition, rising prices and rising interest rates are significantly eroding the purchasing power of the special assets, as this debt must be serviced.

More war means more inflation.
Nouriel Roubini

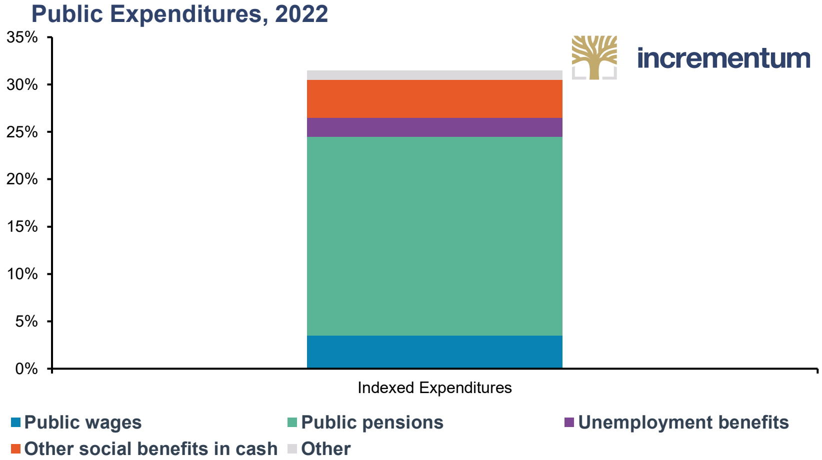
Support payments as well as military and humanitarian in-kind contributions to Ukraine have reached significant levels, as evidenced by the Ukraine Support Tracker **of the Kiel Institute for the World Economy (ifw).** As of February 24, 2023, the first anniversary of the war, Latvia tops the list with assistance amounting to 1.4% of GDP, followed by its two Baltic neighbors Estonia (1.3%) and Lithuania (1.1%). In absolute terms, the US takes the lead with USD 71.3bn. In some countries, however, there is already political resistance to continuing support at this level, in view of the fact that there is no end to the military conflict in sight. In the USA in particular, the Republicans, who won the House of Representatives in the midterm elections of November 2022, are significantly less supportive than the Democrats, a significant factor with regard to passing the budget. The already announced aid for Ukraine' s reconstruction some hopefully not very distant day will put an additional strain on the budget. Pledges abound, but how much money will actually flow once the war is over is another story.

Inflation only relieves the state budget in the short term

Temporary relief is soon followed by a craving for more.
Dalai Lama

In our *In Gold We Trust* report 2022, we pointed out[18] that even a surprise rise in inflation would at best only relieve state budgets in the short term. And that only to the extent that the major spending blocks such as social spending were not already inflation-indexed. The equation that the government can sustainably deleverage itself through high inflation is therefore too simple and even tends to be wrong, because a considerable part of government spending is indexed. For the euro area, the ECB calculates a share of slightly more than 30%.

Automatic Indexation of Public Spending, Euro Area, as % of Public Expenditures, 2022



Source: ECB, Incrementum AG

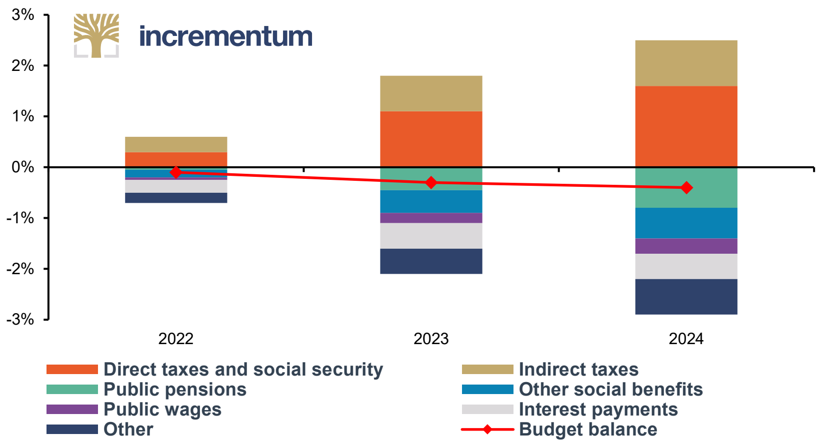
18 *See* "The Status Quo of Debt Dynamics," *In Gold We Trust* report 2022

Current ECB simulations confirm this. **The strong wave of inflation had hardly any net impact on government budgets in 2022.** It is true that governments benefited from inflation-driven higher tax revenues. This mainly affected those taxes that were progressive and those where price increases were particularly pronounced (energy prices, food).

Father Time catches up with us all.
Steve Nicol

Even if governments responded relatively quickly to the political pressure for support measures, there was still a time lag that tended to work in favor of the finance ministers in 2022, but will no longer do so in 2023. **For 2024, the simulations calculate a deficit 0.5 percentage points higher than in the scenario without an inflation shock.**

Direct Effect of the Inflation Surprise on Budget Balance, Euro Area, as % of GDP, 12/2022



Source: ECB, Incrementum AG

I grew up in France, so I had a good dose of Marx in my education. The first thing Marx teaches you is that revolutions are typically the result of inflation.
Louis-Vincent Gave

Other discretionary expenditures are not legally indexed, but they are certainly political, for instance because of the high proportion of pensioners in the electorate. The massive riots in France in the wake of pension reform are evidence of this. Emanuel Macron even invoked Article 49, paragraph 3 of the French Constitution to push through the pension reform.[19]

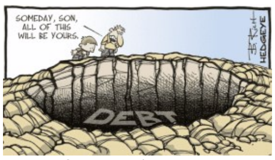
[19] This article states that a law is considered passed even if Parliament does not adopt a motion of no confidence in the government within 24 hours. However, this article can only be invoked for the adoption of the budget and in matters concerning the financing of social security.

Ultimately, whether the government debt ratio will have increased or been reduced at the end of this highly inflationary phase depends on policymakers. It can at least be said with certainty that a significant reduction in the public debt ratio is not to be expected. And should a reduction succeed, it will naturally be the citizens who finance this debt reduction through higher tax payments or lower real transfer payments.

Conclusion

Empires always have the hubris to think they are indestructible, when in fact they are always unsustainable.
Marianne Williamson

The call for more sustainability has been heard for many years, if not decades. All our lifestyles should become more sustainable, and warnings about the possible catastrophic consequences of climate change are particularly loud at the moment. If one enters *sustainability* at Google, the search engine delivers over 2.4 billion results. Beyoncé and Donald Trump together don't even manage a quarter of that. In contrast, when it comes to debt – especially national debt – the issue of sustainability has played no role at all since the Covid pandemic. "Whatever it takes" – this unfortunate phrase from Mario Draghi is the new reality. The energy and inflation crisis that immediately followed the pandemic has turned this unfortunate maxim into a political top seller.



Courtesy of Hedgeye

This imbalance should be reason enough to look at what sustainability actually means. The best-known definition comes from the United Nations World Commission on Environment and Development's report *Our Common Future* in 1987, also known as the Brundtland Report. According to this definition, development satisfies the criterion of sustainability if it "meets the needs of the present without compromising the ability of future generations to meet their own needs". **This universally shared definition of sustainability relies heavily on inter-generational equity.**

Blessed are the young, for they shall inherit the national debt.
Herbert Hoover

It is precisely this intergenerational equity that is jeopardized by government debt. As we have pointed out in previous years, the official, explicit government debt figures suffer from the fact that they do not take into account claims from payments into social security systems and other legally securitized future claims, the so-called implicit debt. For most countries, this results in a – sometimes dramatic – underestimation of the debt burden. The sum of explicit and implicit debt, significantly referred to as the sustainability gap, amounted to 398.9% for Germany as of fall 2022. Only 68.7% is explicitly reported – and the Maastricht criteria apply only to this roughly 17.5% of total debt. The effects of the Covid measures are also dramatic. These have more than doubled the implicit debt. Overall, the pandemic measures have increased implicit debt by 179.6 percentage points. To pay off this debt, either revenues would have to be increased by 16% or expenditures would have to be reduced by 13.8%. Both seem politically impossible.

For the US, implicit debt at the federal level for social spending and Medicare is estimated at around 400% of GDP (2021). Mind you, this is in addition to explicit debt of around 120% of GDP.

What is known can't jerk us around unwittingly. Before anything can be resolved, the implicit must be made into the explicit.
Ryan Holiday

Implicit debt will be a major concern for governments in the coming years due to the demographic changes now taking full effect on the labor market. In the case of explicit debt, the significant increases in interest rates are already having an immediate impact on the preparation of every budget. **The sharp rise in interest rates has thus set the stage for a showdown**.

After all, the lowering of interest rates has prevented a major debt crisis for decades, apart from the turmoil in Greece at the beginning of the 2010s. However, ultralow interest rates did not solve the debt problem but only postponed it into the future and made it worse. After all, the low interest rates invited people to take on even more debt under the more favorable conditions.

We're caught in a trap
I can't walk out
Because I love you too much, baby. Why can't you see
What you're doing to me
When you don't believe a word I say?
Elvis Presley

At the same time, the central banks have maneuvered themselves into the zero interest trap **by fighting the symptoms with interest rate cuts – and with their eyes open.** After all, anyone who encourages debt creation by depressing interest rates need not be surprised if governments, companies, and private households plunge into ever higher debt. Moreover, there were plenty who admonished and issued warnings against this policy of fighting symptoms and avoiding pain. But they were not listened to.

The idea that an economy can grow out of debt has always been dubious and was not refuted by developments in 2021 and 2022. The – in fact merely temporary – decline in government debt ratios was largely due to the base effect resulting from the gradual opening of the economy during and especially after the Covid pandemic. An objective, sober view will classify this special effect as just that, just as the current wave of inflation, is a second, almost simultaneous special effect, which provides only short-term relief for public budgets.

The following comparison of the additional financial burden per percentage point of interest rate increase is extremely revealing.

Extra Interest Expense Per 1% Higher Interest Rates

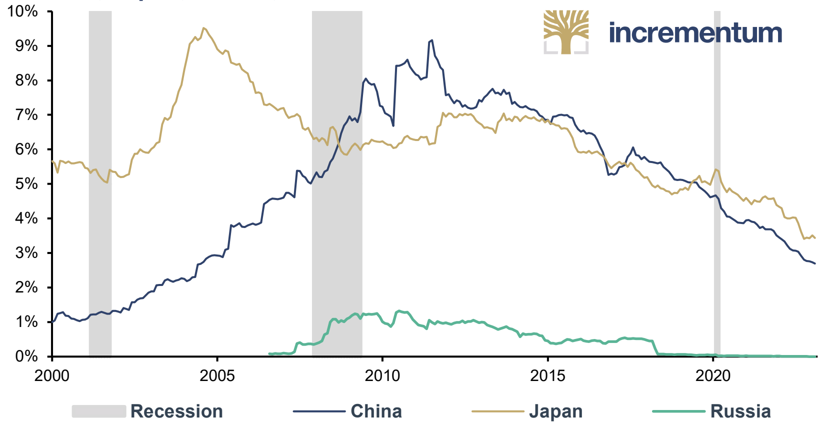
Type	2023 (in USD bn)	as % of GDP	2000 (USD bn)	as % of GDP
Federal	316	1.20%	57	0.22%
States	12	0.05%	6	0.02%
Local Municipalities	23	0.09%	9	0.03%
Private Households	244	0.93%	78	0.30%
Non.-Fin. Corporations	128	0.49%	47	0.18%
Total	**723**	**2.76%**	**198**	**0.75%**

Source: Real Investment Advice, Incrementum AG

It shows two things. On the one hand, it demonstrates how strongly debt has increased over the past two decades; on the other hand, it makes clear why central banks ultimately have their hands tied to a permanently higher interest rate level, provided they do not want to trigger a veritable debt crisis. The fact that the *absolute* additional burden is relatively low by historical standards does not help much. It is the *relative* additional burden resulting from the sharp rise in interest rates that will have a significant economic impact in itself, and has already done so.

The current showdown in geopolitics is likely to have impact on bond yields. Why should states, which are increasingly hostile to the West with the USA at the forefront, maintain or even expand their portfolio of government bonds? Ultimately, this would support countries in their armament efforts through lower interest burdens, even though the armament is explicitly directed against oneself.

Foreign Holdings of US Treasuries, as % of Total US Public Debt, China, Japan, Russia, 01/2000-02/2023



Source: Reuters Eikon, Incrementum AG

The fragile wants tranquility, the antifragile grows from disorder, and the robust doesn't care. Debt always fragilizes economic systems.
Nassim Taleb

A profound debt crisis can therefore only be avoided at the price of a continuation of the low interest rate policy and the associated substantial inflation potential. If, however, unlike in the past two decades, the markets were to form higher inflation expectations, this would increase the inflation premium for bonds and loans of all kinds, thus rendering the loose monetary policy futile. **The showdown between these two economic adjustment scenarios is already in full swing.**

Status Quo of the Inflation Trend

Those who expect inflation to fall rapidly in the coming year may well be correct. But history suggests that's a "best quintile" outcome. Few acknowledge the "worst quintile" possibility, in which inflation remains elevated for a decade.

Research Affiliates

- The peak of the current wave of inflation is behind us, both in the US and the Eurozone.
- Inflation is likely to prove more persistent than hoped for by central banks. This is indicated by the persistence of the core inflation rate, which is preferred by central banks to assess the inflationary situation.
- Even in Japan, the inflation rate has now risen significantly, although at 3.2%, it is significantly lower than in the US, the Eurozone, and many other countries.
- We consider at least one more wave of inflation to be very likely. In the short term, disinflationary effects could occur.
- In the showdown between inflationary and deflationary dynamics, inflationary dynamics will prevail. The increased level of inflation will be accompanied by higher inflation volatility.
- Our *Incrementum Inflation Signal*, which usually signals a change in inflation dynamics relatively early, has been at its maximum level again since the beginning of April 2023, indicating rising inflation tendencies.

How quickly times can change: In the fall of 2020, things were still quiet, calm as a cucumber on the inflation front. At least if you looked at the official figures. Underneath the surface, there was already a lot of tension building up. Years of low and zero interest rate policies had flooded economies around the globe with vast amounts of liquidity. Every crisis, even if it was only looming, was covered up with monetary tidal waves; every drop in the inflation rate below the inflation target of 2% was interpreted as a sign of a deflationary collapse and likewise combated by opening the monetary floodgates.

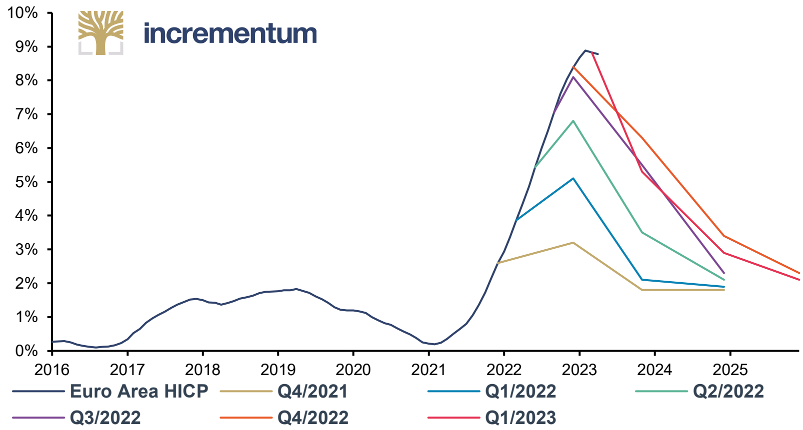
I think we now understand better how little we understand about inflation.
Jerome Powell, June 2022

That's why, as early as fall 2020, we felt compelled to publish a special report entitled "The Boy Who Cried Wolf: Inflationary Decade Ahead?". In this special publication, we warned of the consequences of the rapidly increasing money supply and the enormous fiscal stimulus. We concluded then that now was precisely the right time for central banks to slowly and cautiously raise interest rates and withdraw liquidity from the system. **However, it's apparent that there is room to broaden the distribution of our studies among central bank circles.**

We see inflation as a hump and the hump eventually declines. It will decline over the course of 2022, and we see it going towards our target in the course of 2022.
Christine Lagarde, December 2021

When the inevitable happened in 2021, and inflation rates around the world began to rise sharply, central bankers turned to appeasing rhetoric. *Transitory* was the rise in inflation, no reason to worry. In December 2021 Christine Lagarde compared the inflation trend to a *hump*, while Isabel Schnabel, a member of the ECB's Executive Board, forecast in November 2021 that the peak of the inflation wave had probably already been reached. This forecasting precision is reminiscent of Christopher Columbus, who actually wanted to go to India and landed in America, which he promptly christened the *West* Indies.

Euro Area HICP and ECB Euro Area HICP Projections, yoy, 01/2016-12/2025

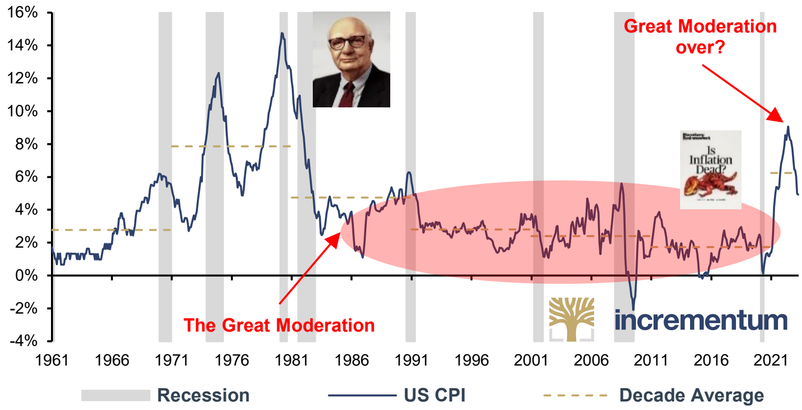


Source: ECB, Reuters Eikon, Incrementum AG

Once your mindset changes, everything on the outside will change along with it.
Steve Maraboli

In the meantime, the topic of inflation has become omnipresent in everyday life, whether in small talk with friends or relatives, when shopping at the supermarket, in the professional context of wage and price negotiations and, of course, also when investing. In the meantime, the view has prevailed – even among central bankers – that we will have to deal with increased inflation rates for the time being. **Welcome to the new inflation mindset.**

US CPI, yoy, 01/1961-04/2023



Source: Reuters Eikon, Incrementum AG

Inflation: Delivered as Ordered

In this chapter, we will take an in-depth look at the current situation and discuss signs that indicate that a second, probably even more pronounced, wave of inflation is already building up, to hit after the current wave of inflation has subsided.

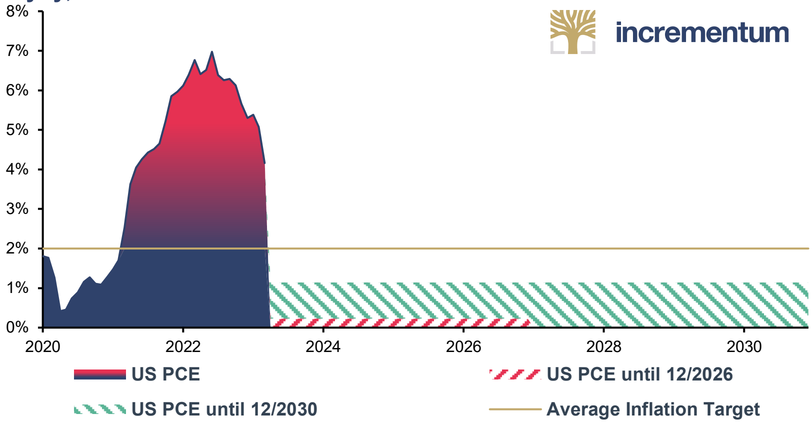
The phenomena of this secondary wave may be quantitatively more important than those of the primary wave.
Joseph Schumpeter

In 2020, the Federal Reserve adjusted its inflation target to *average 2% inflation* over an undefined period. We discussed this adjustment in detail in the *In Gold We Trust* report 2021.[20] Against the background of the significantly increased inflation figures in the past 2 years, it would meanwhile take a strong and sustained disinflation, or better even a deflationary phase, for the Fed to hit its new inflation target again.

The following chart shows how much the inflation rate would have to fall in the coming years. For the Federal Reserve to return to the average inflation target by the end of 2030, inflation would have to average 1.1% over the next 6 ½ years. This is represented by the green shaded area. If the Federal Reserve is only given until the end of 2026, then the inflation rate must average 0.2% over the next 3 ½ years, indicated by the red shaded area.

20 "The Status Quo of Gold," *In Gold We Trust* report 2021, p. 60f.

US PCE and US PCE Required to Reach Average Inflation Target, yoy, 01/2020-12/2030



Source: Reuters Eikon, Incrementum AG

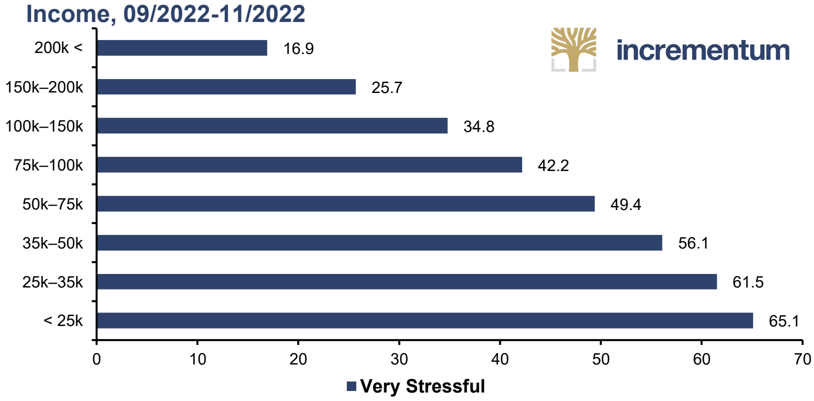
COVID-19 and the war in Ukraine will mark a secular turning point. There will be no return to the lowflation era of the 2010s.
Dario Perkins

The opening up of the economy after the myriad of Covid-19 lockdowns and the war in Ukraine were pointed to as the causes of a supposedly merely temporary inflation problem. Warnings like ours that an expansion of the M3 money supply by more than 27% between January 2020 and April 2022 would provide the basis for high inflation were ignored. The BIS paper "Does money growth help explain the recent inflation surge?" of January this year came late, ultimately too late, to the unsurprising conclusion that ignoring money supply expansion had been a mistake.

Chairman Powell can shout from atop his ivory tower that inflation identifies as transitory, but stagflation is where we're headed.
Doug French

In the US, the CPI (4.9%) and the PCE Index (4.6%) are still well above the inflation target of 2%. Currently, food has the highest inflation rate. This fact is worrisome for the formation of inflation expectations. In the *In Gold We Trust* report 2020, we cited a study showing the high impact of food prices on inflation expectations. And Jerome Powell just recently said, "*The modern belief is that people's expectations about inflation actually have a real effect on inflation*". Given that gasoline prices are also still elevated, it is hardly surprising that poorer social strata in particular are affected by the inflation crisis.

Household Pulse Survey: Level of Stress Caused by Price Increases in the Last Two Months, by 2021 US Pretax Household Income, 09/2022-11/2022

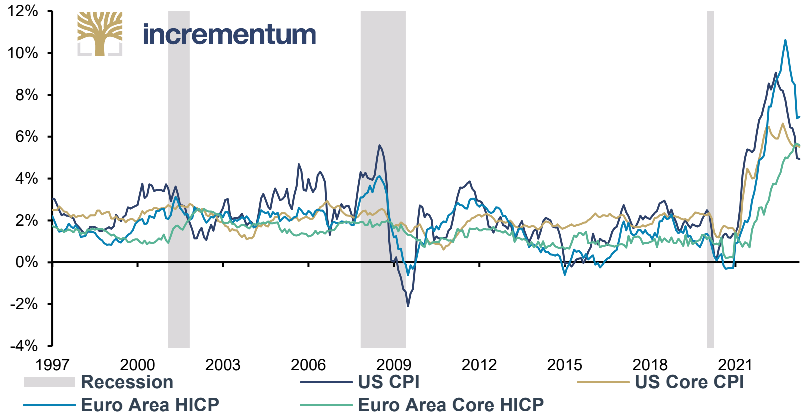


Source: Federal Reserve Dallas, Incrementum AG

The inflation bill has so far been even higher in the eurozone. At the peak of the current inflation wave, in October 2022, the inflation rate even reached double digits, at 10.6%. Since then, inflation has been on a clear downward trend. However, at 7.0% in April, it is still well above the inflation target of 2%.

Both Christine Lagarde and Jerome Powell, however, will have quite the headaches over the fact that core inflation, is now higher than the headline inflation rate, and even shows a slight upward trend in the eurozone, while it is moving roughly sideways in the US – another sign that inflation is more persistent than expected.

US and Euro Area Core and Headline Inflation, yoy, 01/1997-04/2023



Source: Reuters Eikon, Incrementum AG

Be careful what you wish for, lest it come true!
Aesop

In Japan, the BoJ desperately wanted inflation for decades – now it has it. For the first time since 1981, inflation exceeded 4% in January. The new governor of the BoJ, Kazuo Ueda, therefore, has a thankless task ahead of him, because slowly but surely the country of the rising sun is starting to feel the consequences of decades of unconventional monetary policy:

- 1999: introduction of ZIRP
- 2001: QE1
- 2010: QE2 and increase of inflation target to 1%
- 2013: QQE and the 2-2-2 plan – doubling the monetary base and achieving 2% inflation within 2 years
- 2014: expansion of QQE
- January 2016: adoption of NIRP
- July 2016: further expansion of QQE, specifically in ETFs
- September 2016: introduction of YCC[21]
- April 2020: stimulus packages totaling 117 trillion yen monetized

The definition of insanity: Doing the same thing over and over again and expecting different results.
Albert Einstein

Among the Western industrialized countries, the monetary showdown seems to have progressed furthest in Japan. One should therefore pay particular attention to monetary developments in Japan, as they could serve as a blueprint for the Western world. **We believe that Western central banks are on the same path – only with a few years' delay.**

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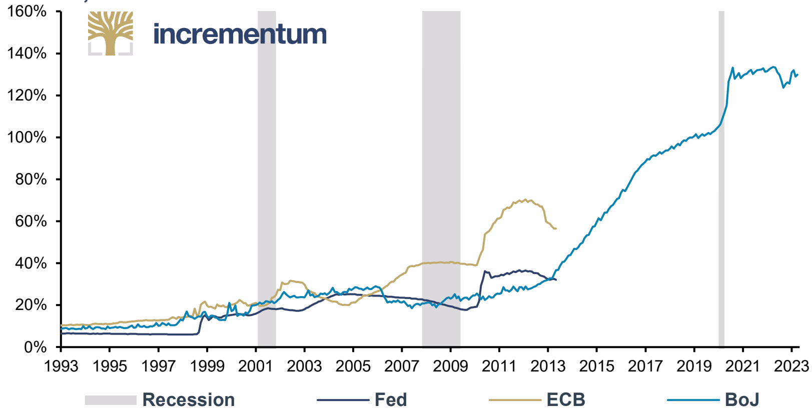
21 *See* "The Status Quo of Gold," *In Gold We Trust* report 2021

Central Bank Balance Sheets (Fed and ECB 10 Year Lag), as % of GDP, 01/1993-05/2023

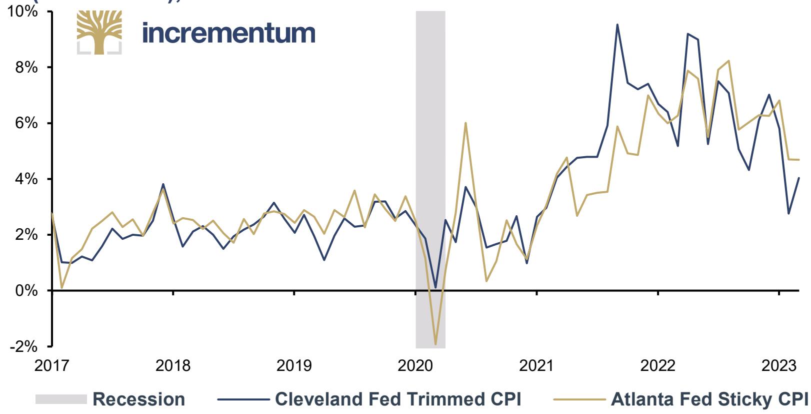


Source: Reuters Eikon, Incrementum AG

The Tug of War between Team *Inflation* and Team *Deflation*

We assume that the peak of the current inflation wave has definitely been passed. The falling inflation rates of recent months make this abundantly clear. The Trimmed Mean Index measured by the Federal Reserve Bank of Cleveland reports the lowest value in two years, while the Sticky-Price CPI compiled by the Federal Reserve Bank of Atlanta shows the lowest growth in a year.

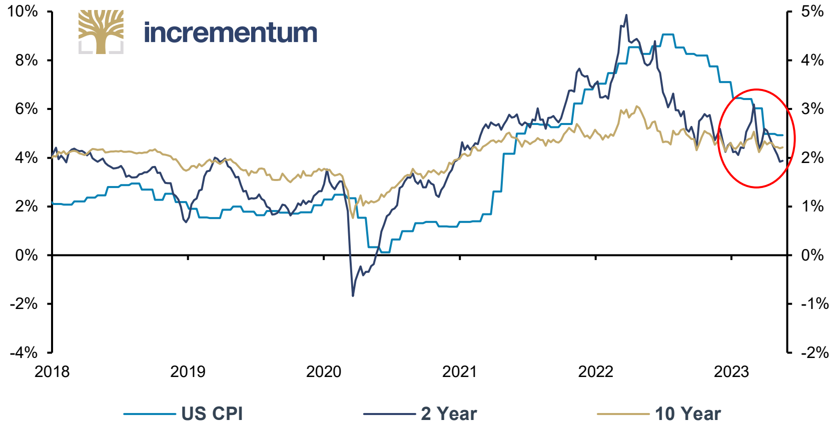
Cleveland Fed Trimmed CPI and Atlanta Fed Sticky CPI, mom (Annualized), 01/2017-04/2023



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

US breakeven rates also suggest that disinflationary forces now have the upper hand in the short term.

US CPI (lhs), yoy, and US Breakeven Inflation Rate (rhs), 01/2018-05/2023



Source: Reuters Eikon, Incrementum AG

The greater the tension, the greater is the potential.
Carl Jung

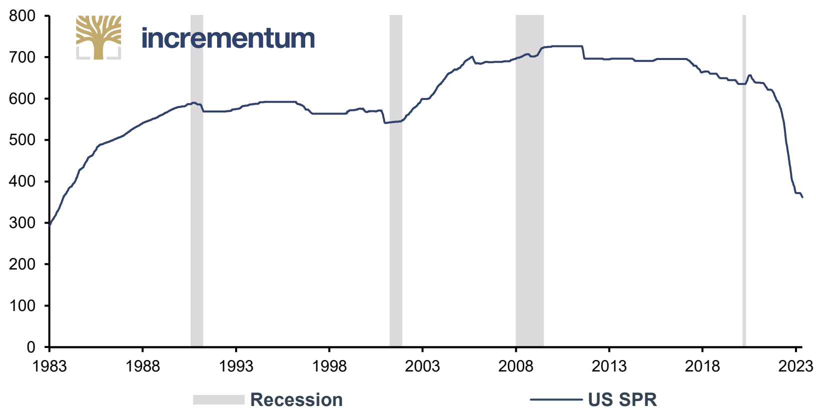
Fundamentally, there is always a tension between inflationary and deflationary forces. It's a tug of war that weighs back and forth, with team members flexing their muscles for a moment and then letting go again for a moment, or even switching sides. **We would now like to analyze the most important team members of this tug of war in more detail.**

Temporary disinflationary dynamics in 2022

In 2022, the following three factors had a negative impact on consumer prices in the short term.

- **Tapping the SPR:** To counter inflation, the US Strategic Petroleum Reserve (SPR) was reduced by 300 million barrels, or almost 50%. These reserves might still have been useful in the near term, given the geopolitical situation, but were used for short-term political agendas. The resulting price drop may have earned the Democrats a vote or two in the midterm elections. Biden has already emphasized several times that he wants to replenish reserves. Initially it was planned to start the refilling process at an oil price of USD 70/barrel, then only at USD 60/barrel.

US SPR, in mn Barrels, 01/1983-05/2023

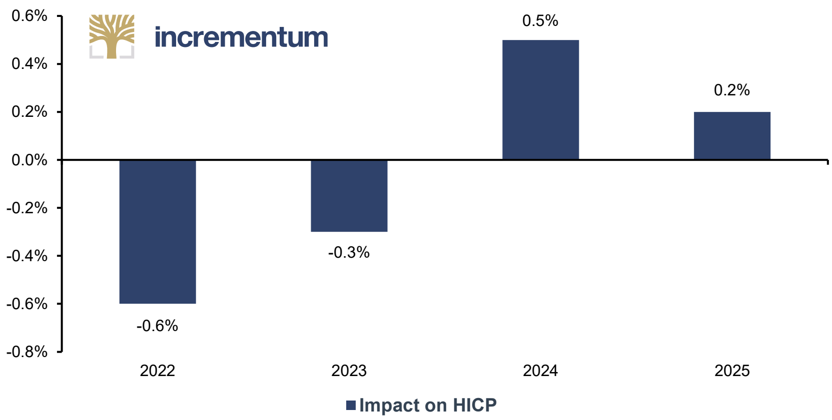


Source: EIA, Incrementum AG

- **Lockdown in China:** While many countries struggled with the challenges of reopening their economies, China experienced the strictest lockdown to date in the previous year. This led to a significant reduction in demand, particularly in the energy sector. Last year, China's average oil consumption fell by 390,000 barrels per day compared to 2021, the first annual decline since 1990. However, in late 2022, protests put an abrupt end to the zero-Covid policy, and China's economy is now open again. The present development holds the potential to sustainably increase global aggregate demand. During the pandemic, Chinese citizens – like those in the West – accumulated significant savings. These have grown by over 50% in the past three pandemic years, and by USD 2.6trn in 2022 alone. As the Chinese economy opens up and people are able to spend their savings again, continued expansionary monetary policy with falling borrowing costs will set inflationary dynamics in motion over the medium term.

- **Price caps temporarily conceal inflation:** Measures such as price caps, the temporary reduction of tax rates, price reductions such as the 9-euro ticket in Germany for public transport, the takeover of advance payments for gas, and similar measures have one thing in common: They are lowering the rate of inflation today, but at the price of a higher rate in the future. According to ECB calculations, last year euro area government measures lowered the inflation rate by a total of 0.6 percentage points; in the current year, this effect is only half as high at 0.3 percentage points. In 2024, the trend will turn around: When the tax breaks and price caps expire completely, prices will rise more strongly than if these government interventions had not existed at all.

Impact of Fiscal Energy/Inflation Support on the HICP, 2022-2025



Source: ECB, Incrementum AG

A great civilization is not conquered from without until it has destroyed itself from within.
Ariel Durant

In the *In Gold We Trust* report 2022, we detailed in the chapter "When Rome Lost Its Reserve Currency" how the resort to state price ceilings under Emperor Diocletian, which was merely symptom control, only accelerated economic decline. Distorting price signals carries a host of undesirable consequences. For members of the *This-Time-Is-Different Community* we recommend the book *Forty Centuries of Wage and Price Controls*, by Robert L. Schuettinger and Eamonn F. Butler. This fabulous work details how wage and price controls ultimately work to the detriment of consumers, workers, and the overall economy.

In conclusion, it can be said that without the coincidence of these three short-term dynamics, the current inflation surge would have been even more pronounced. Now, however, these three factors are gradually reversing and will have an increasingly inflationary effect.

Short-term disinflationary dynamics

Liquidity Withdrawal in the Financial Markets and the Reverse Prosperity Effect

We used to get used to the billion. It used to be million, then it was billion, now its trillion.
Donald Trump

In our special publication "The Boy Who Cried Wolf: Inflationary Decade Ahead?" from the fall of 2020, we already pointed out that a restrictive monetary policy would be necessary to counteract the impending wave of inflation at an early stage. With the monetary and fiscal Corona measures, all previous limits have been blown. In the USA, the CAREs Act was passed in March 2020 in the amount of USD 2trn. Between March and July 2020 alone, the money supply in the USA increased by over 19%.

I'm on a tequila diet. So far, I've lost two days.
Tommy Lee

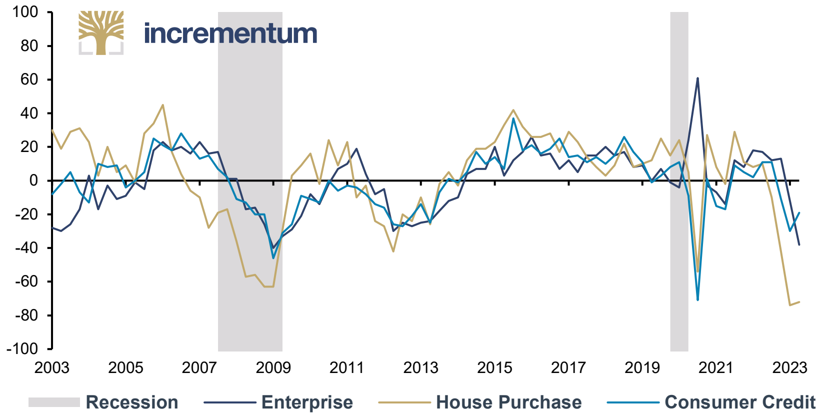
What is completely underestimated is that it takes quite some time for an expansion of the money supply to unfold in the real economy and drive up inflation rates. We also call this the *Tequila Theory of Money*. A few shots of tequila tonight will undoubtedly help to lift the spirits at a party. It's only the next day that the inevitable consequences make themselves felt in the form of nausea, a stinging headache, and potential amorous missteps.

In 2022, the price dams began to burst, and after a few months of appeasement speeches about the *temporary* nature of inflation, panic broke out among central banks. **We have to admit that a year ago we would have thought four consecutive 75 basis point rate hikes by the Federal Reserve were next to impossible.**

You can avoid reality, but you cannot avoid the consequences of avoiding reality.
Ayn Rand

Now we have come full circle, but once again we have to warn about the lag effects, but this time in the opposite direction. The effects of QT, the shrinking of the aggregate central bank balance sheet, and higher interest rates will now be felt more clearly from day to day. The time factor is often underestimated in economic analyses, but it has an effect, sometimes sooner, sometimes later. Credit demand is currently collapsing across the board before our eyes.

ECB Bank Lending Survey, Net Loan Demand, Q1/2003-Q2/2023



Source: ECB, Incrementum AG

In view of these developments, the continued implosion of the so-called "Everything Bubble" is a realistic scenario. From our perspective, there are three factors that increase the probability of further market turmoil to be expected:

In 2008 it took nine days for investors to withdraw USD 16 billion from Washington mutual before it closed its doors. In 2023, Silicon Valley bank lost USD 40 billion in one day and if they had stayed open another day, they would have seen USD 100 billion of withdrawals. Things move faster now.
Clive Thompson

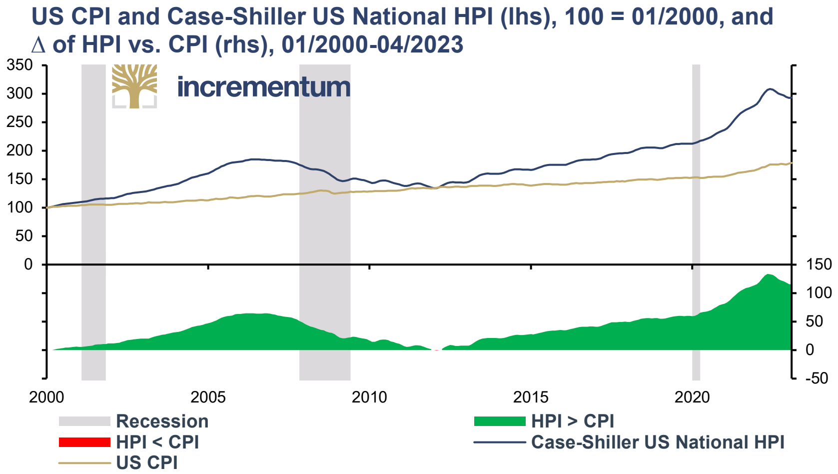
First, technically easier access to brokerage accounts and bank accounts via mobile allows for quick and panicked selling or money withdrawal. In addition, social media platforms greatly accelerate the dissemination of information . This gives regulators less time to react to a potential crash or bank run.

Second, private trading in derivatives, particularly daily options, has increased sharply in recent years. Although the increased use of these options has led to sometimes substantial short-term increases, it could exacerbate a panic in the markets.

Third, banks have significantly higher derivatives positions than in previous financial crises. According to the BIS, the gross market value of outstanding derivatives – the sum of positive and negative values – increased from USD 12.4trn at the end of 2021 to USD 18.3trn at the end of June 2022, an increase of 47% in six months, according to BIS statistics.

A rising tide doesn't raise people who don't have a boat.
Rahul Gandhi

By the time the Federal Reserve stopped QE4 in the spring of 2022, it had already built up the largest stock of mortgage-backed securities (MBS) in the world. About 22% of all mortgage loans were on its balance sheet. The current rising interest rates and the Federal Reserve's dumping of MBS are now having an effect – mortgage rates are rising and home prices are falling. The resulting reverse wealth effect will clearly have a dampening effect on inflation.

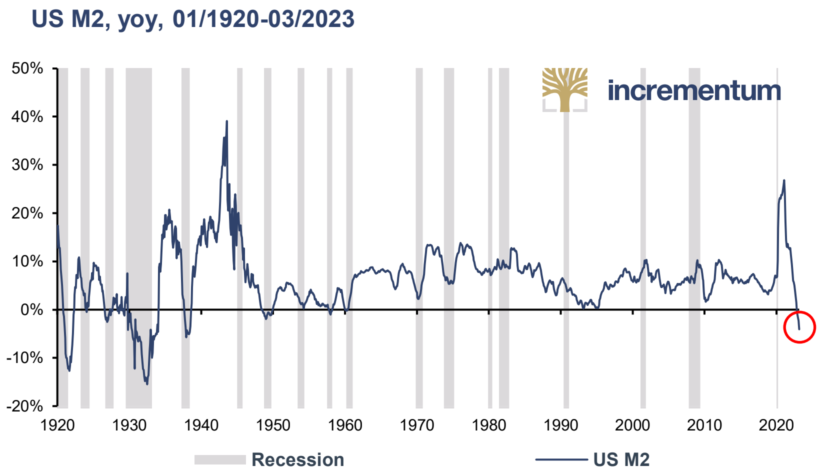


Source: Reuters Eikon, Incrementum AG

Negative money supply growth

'Cause if summer is here
I'm still waiting there
Winter is here
And I'm still waiting there.
Bob Marley

In the USA, money supply growth is negative for the first time since the Great Depression. In our view, central banks would be well advised to wait and analyze the effects of their restrictive monetary policy. The inverted yield curve and poor consumer sentiment are already strong signs of an economic slump. **Recessions are always disinflationary.**



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

The idea that a central bank can effectively control interest rates and the yield curve is like trying to control a wild elephant with a feather duster.
Nouriel Roubini

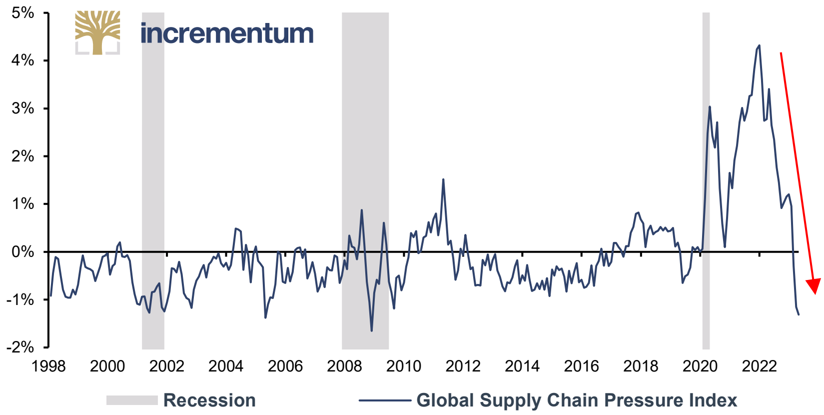
Although a financial market collapse is disinflationary, sometimes even deflationary, the response will be highly inflationary: QE, YCC and interest rate cuts. What is certain is **that the longer and deeper the financial markets fall, the more stimulative the monetary and fiscal policy responses will be, ultimately leading to another, higher wave of inflation.**

Medium- and long-term disinflationary dynamics

Global supply chains

Global supply chains have recovered from the bottlenecks of recent years. Even the PlayStation 5 is now available in stores again without delivery delays. Despite the challenges supply chains may face in a deglobalizing world, we expect further easing in the medium term. Pandemic-related lockdowns should – for the time being at least – be a thing of the past.

Global Supply Chain Pressure Index, 01/1998-04/2023



Source: Federal Reserve New York, Reuters Eikon, Incrementum AG

Technology and innovation

We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten. Don't let yourself be lulled into inaction.
Bill Gates

The days when trade liberalization and globalization on the one hand and demographics[22] on the other had a dampening effect on prices seem to be over. **Therefore, innovations and technological progress remain the only long-term deflationary forces.**[23]

Technological progress has for some time allowed central banks to pursue a considerably more expansionary monetary policy, as part of the expansion of the money supply is offset by productivity gains. Falling prices for electronic devices such as cell phones, televisions and computers have widened the scope for higher prices of other goods in the CPI, in compliance with, indeed in the logic of, central banks for the purpose of achieving the 2% inflation target.

Technology has never moved as fast as it moves today… Everything in technology over the last 50 years likely doubles in the next two years.
Jeff Booth

The integration of artificial intelligence into everyday life and the labor market will primarily increase productivity. This has a disinflationary effect on wages, as many tasks can now be taken over by machines. We are in favor of pioneering technological developments, but at the same time there is a risk that they could prompt states to take the printing press up a gear.

Housing market

Owners' equivalent rent (OER), with a high weighting of 24%, remains at a significantly elevated level of 8.1%. Due to the strong time lag, this component has little informative value for the inflation trend and even distorts it. The current CPI would already be lower without this time lag, while it would have been higher in 2021 and 2022. However, as we know, real estate prices around the world are already in a correction, including in the US. The S&P/Case-Shiller US National Home Price Index has so far only fallen 5% from its all-time high of June 2022 – but the trend is not your friend.

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[22] *See* "Global Demographics Turn Inflationary," *In Gold We Trust* report 2021
[23] *See* Booth, Jeff: The Price of Tomorrow , 2020 – a book very, very well worth reading!

Do we now believe that the inflationary decade announced in the In Gold We Trust report 2021, which is associated with monetary climate change, has actually lasted only two years? To answer this question, we need to take a closer look at the various inflationary forces.

Short-term inflationary dynamics

Unexpectedly high interest burden and price increase/supply shortage spiral

That I'd fallen for a lie?
You were never on my side.
Billie Eilish

We can reassure all readers that, no, we have not fallen for *Erdoganomics*. Nevertheless, we would like to point out that, contrary to conventional wisdom, higher interest rates can have an inflationary effect in the short term.

As we'll discuss in more detail in the following section, current inflation is mainly the result of substantial budget deficits monetized by central banks. Debt-financed consumption has been more inelastic than suspected since the end of NIRP/ZIRP. Instead, interest rate increases are now manifesting themselves as rising costs for businesses – and governments. Higher borrowing costs lead to higher production costs for the same quantity of goods. In this situation, either prices have to be raised or fewer goods have to be produced.

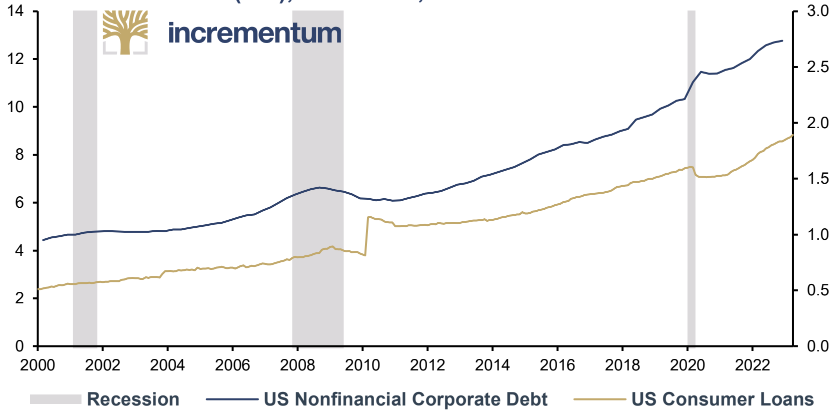
In our *In Gold We Trust* report 2022 we dealt in detail with the *price-increase supply-shrinkage spiral*.[24] The interest rates now accruing are tightening this spiral. Given that most companies have been desperately seeking additional workers for years – and in some cases still are – we believe a broad wave of layoffs will be a long time coming. The cost of hiring, regulatory requirements, and high training costs for new entrants are causing many companies to retain workers even during periods of declining economic activity – this is known as *labor hoarding* – at least for a while.

It is a savings ratio of 45% which is at the root of China's power. The lack of savings in America and its western alliance is their Achilles heel.
Alasdair Macleod

The consumer is now faced with higher interest costs but has so far decided that it is best to absorb the price increases with further debt. In times of hedonistic demonstrative consumption, which triggers short-term endorphin-induced moments of happiness, many people are simply unable to stop consumption and unwilling to tighten their belts. The forced savings of the Covid lockdowns, government support measures, and an increased tapping of the credit card as a source of financing prevent the inevitable, but this is only temporary. However, the now-higher cumulative interest rates will sooner or later lead to the need to punch an even tighter hole in the belt.

[24] *See* "The Status Quo of the Inflation Trend," *In Gold We Trust* report 2022

US Nonfinancial Corporate Debt (lhs), in USD trn, and US Consumer Loans (rhs), in USD trn, 01/2000-04/2023



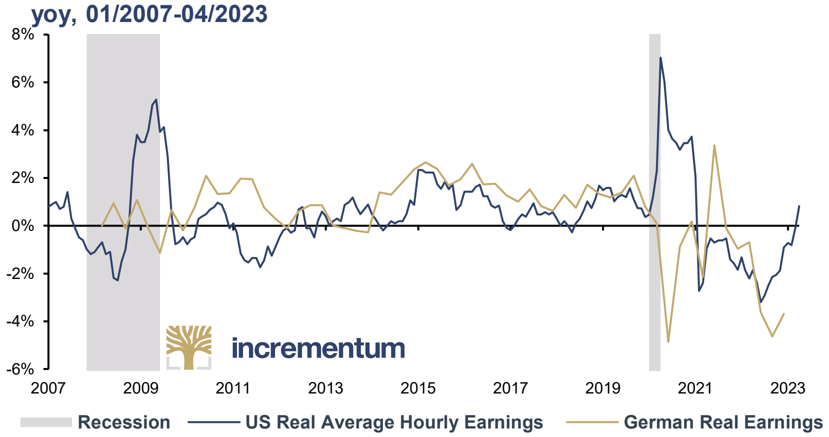
Source: Federal Reserve St. Louis, Reuters Eikon, Incrementum AG

Courtesy of Hedgeye

The decline in real wages led to numerous strikes recently:

- Verdi-Chef Wernke verteidigt Mega-Streik: "Notwendig" ("Verdi boss Wernke defends mega-strike: 'Necessary'")
- Major travel disruption in London due to strike action
- U.S. labor strikes went up almost 50% between 2021 and 2022
- Fünftägiger Streik in den Niederlanden ("Five-day strike in the Netherlands")
- Australian strike wave continues despite union suppression
- Thousands strike in France for higher wages

US Real Average Hourly Earnings and German Real Earnings, yoy, 01/2007-04/2023

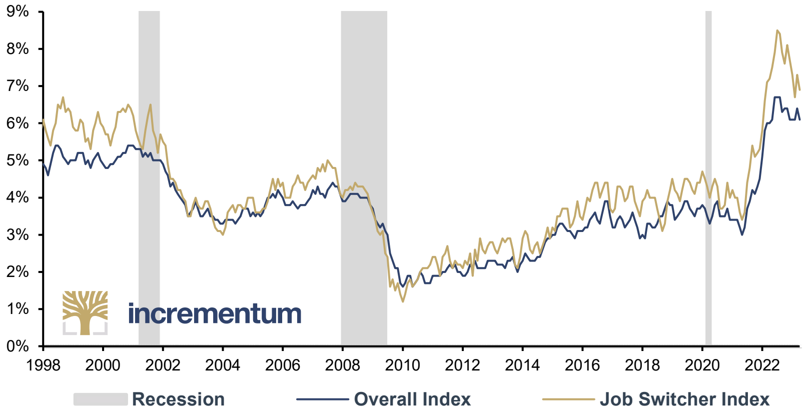


Source: Statistisches Bundesamt, Reuters Eikon, Incrementum AG

I want to make more money, make more music, eat Big Macs and drink Budweiser's.
Kid Rock

In the US, it has been possible for those changing jobs to push through higher wage demands. However, this premium as a result of the distortions on the labor market in the wake of the Covid pandemic has shrunk increasingly in recent months.

Atlanta Fed Wage Growth Tracker, 3-Month Average, 01/1998-04/2023



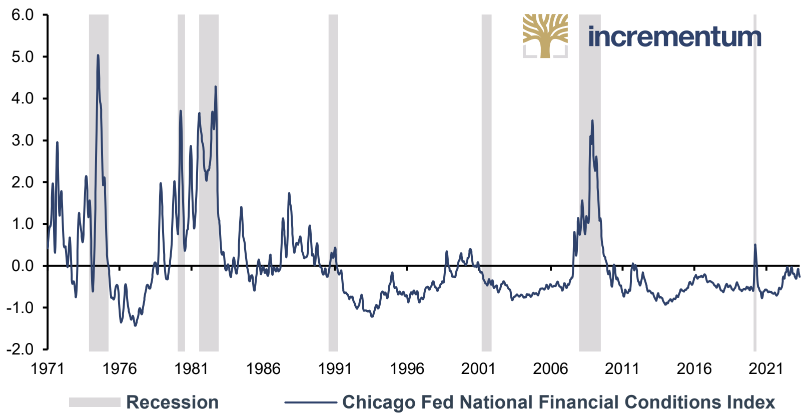
Source: Federal Reserve Atlanta, Reuters Eikon, Incrementum AG

Treasury General Account remediation

When you try your best, you don't succeed.
Coldplay

While the Federal Reserve is seeking to remove money from the system through QT, the US government has been drawing down its reserves at the Federal Reserve, injecting about USD 700bn into the system in one year. The cash reserves are held in a Federal Reserve account called the Treasury General Account (TGA). The TGA decline is one of the main reasons why financing conditions remain expansionary despite the marked increases in interest rates.

Chicago Fed National Financial Conditions Index, 01/1971-05/2023

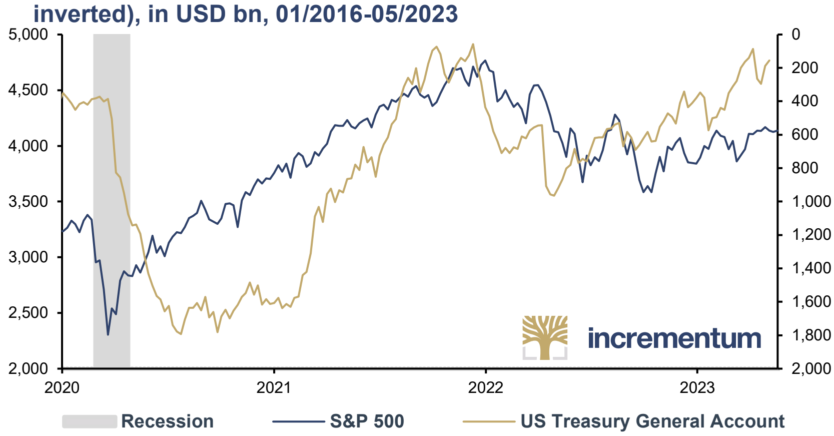


Source: Reuters Eikon, Incrementum AG

Money doesn't grow on trees.
Jakob Nielsen

However, this cash account is finite, like the strategic oil reserve. In fact, it is currently significantly below the targeted buffer level of about USD 400 billion. Once the debt ceiling is raised for the 21st time since the dotcom bubble, we can expect a large portion of Treasury issuance to flow back into the TGA. In general, inflows or outflows in the TGA can have a significant short-term impact, not only on inflation but also on financial markets. In 2021, Biden was able to spend enough money without generating additional deficits because the Trump administration, after the lockdowns, had filled this government piggy bank with up to USD 1.8trn. **The following chart shows the amazing correlation between equity markets and the TGA account.**

S&P 500 (lhs), yoy, and US Treasury General Account (rhs, inverted), in USD bn, 01/2016-05/2023



Source: Reuters Eikon, Incrementum AG

Medium-term inflationary dynamics

A budget hole is plugged by an even bigger budget hole

It takes two to tango – even to get consumer prices to rise. In short, there are two ways to raise consumer prices permanently.

1. Credit expansion of commercial bank loans
2. High sovereign budget deficits, especially when monetized by central banks

With QE1 to QE3, the central banks tried to encourage the banking sector to lend more by providing incentives. An increase in bank reserves was supposed to support this process. However, it turned out that the sluggish lending was not due to insufficient reserves. Although demand for credit increased, it was too little to offset other disinflationary forces such as globalization and technological progress.

Before the pandemic, several unsuccessful attempts had already been made to reach the 2% inflation target and we were now facing a global economic crisis. **This led central banks and governments to take the second path, the close coordination of monetary and fiscal policy.** This move can be described as a paradigm shift – we called it *monetary climate change* in the *In Gold We Trust* report 2021. As we predicted, this measure led to significantly higher consumer prices.

Nothing is easier, or more emotionally satisfying, than blaming high prices on those who charge them, rather than on those who cause them.
Thomas Sowell

Even before the war in Ukraine began, the bill for the party was presented. In January 2022, i.e. in the month before the outbreak of war, the HICP already stood at 5.1% and would have continued to rise even without the war. Nevertheless, public discussion mainly blamed Putin – the portmanteau word *Putinflation* briefly made the rounds – and his war, but also the reopening of the economy after the pandemic, for the persistent inflation. This was followed by corporate greed being seen as the main motive for the high inflation rates – there is still talk of *greedflation*. It is not only the unions – as one would expect – that identify greed as the culprit. Isabel Schnabel, a member of the ECB Executive

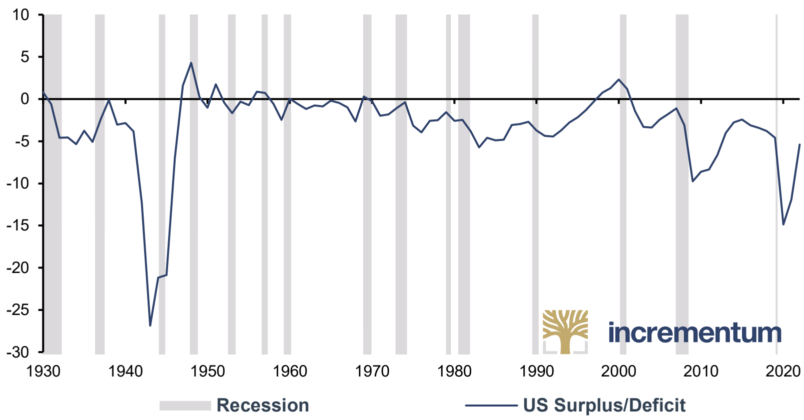
Board, in the best "*Stop the thief!"* distraction rhetoric, has also accused companies of being inflation profiteers.

The illusion that cooperation between monetary and fiscal policy would solve social and economic problems has been perpetuated. Today, the state pays for any damage and, since Covid, more and more citizens have tended to adopt a full-cash mentality. **Most public discussion, therefore, revolves around the state doing too little, not too much.**

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 second path (fiscal stimulus) has thus been very "successful" in producing higher inflation rates. On the other hand, this also means that a restrictive monetary policy alone is not enough to counter inflation. Instead, countries will have to significantly reduce their budget deficits. **We see the probability of this happening as being about as high as the chance of German Chancellor Olaf Scholz winning a rap battle against Eminem.** We would like to go into more detail on why we arrive at this assessment.

US Surplus/Deficit, as % of GDP, 1930-2022



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

After the pandemic ended, the US ran its highest deficits since entering World War II. Today's deficits cannot be compared to the unique war costs of that time. However, people have increasingly developed an entitlement attitude toward welfare. If President Joe Biden had had his way and the proposed Build Back Better package had won approval in the House of Representatives, the deficit would have been even higher. Democrats had to settle for a slimmed-down version, ironically called the Inflation Reduction Act.

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

In Europe, the financial behavior of the proverbial Swabian housewife is now as far from being emulated as the Anaheim Mighty Ducks are from winning the Stanley Cup. The German government only launched the so-called Economic Stabilization Fund in the wake of the pandemic. As a result of the Ukraine war and the looming energy crisis, the fund was increased by a further EUR 200bn. Part of these funds will now be used to regulate the price of electricity and gas. And military spending is also being massively increased. A *special fund* of EUR 100bn for arming the German armed forces, which was passed in December 2022, was already deemed insufficient in January. Circumventing the self-imposed debt brake by creating a special fund is comparable to stopping smoking cigarettes and smoking two cigars a day instead. Such budgetary cosmetics will further drive the increasing inflationary dynamics.

For what can war, but endless war, still breed?
John Milton

At present, there is no end in sight to the Ukraine war, and it is to be expected that additional debt will be taken on by Western governments to finance the rearmament. The time of the peace dividend is over, and a geopolitical showdown is becoming increasingly likely. "**War is inflationary," as our interviewee this year, Zoltan Pozsar**[25]**, so aptly summarized in his essay "War and Interest Rates".**

State loan guarantees

In our *In Gold We Trust* report 2021 interview, Russell Napier, known for the longest time as a deflationist, laid out his inflationary outlook.[26] He based his forecast, among other things, on the following reasoning: "*So for me, the crucial structural change here is that the governments are providing credit guarantees to the commercial banking system*".

In our opinion, government guarantees will trigger a significant inflationary push. Particularly since the outbreak of the pandemic, state-guaranteed loans have become increasingly important as an instrument of economic stimulus. Olaf Scholz, then Finance Minister and now Chancellor of Germany, emphasized at the time that thanks to these guarantees all economic challenges could be overcome: "*There is no upper limit to the amount of loans KfW [German development bank] can grant … We are putting all our weapons on the table*."

The evidence that we are shifting, increasingly rapidly, along the continuum from a market economy towards a command economy are evident every day.
Russell Napier

In fact, KfW's funding volume has increased dramatically since 2019, from EUR 77.5bn at the time to EUR 166.9bn in 2022. This significant increase is primarily due to the fact that this instrument is also being used in the energy crisis. Our forecast is that direct bailouts, government guarantees, and central bank credit lines to support the economy will continue to increase in the future, as confidence in existing institutions must be maintained at all costs. **The price, however, is structurally increased inflation.**

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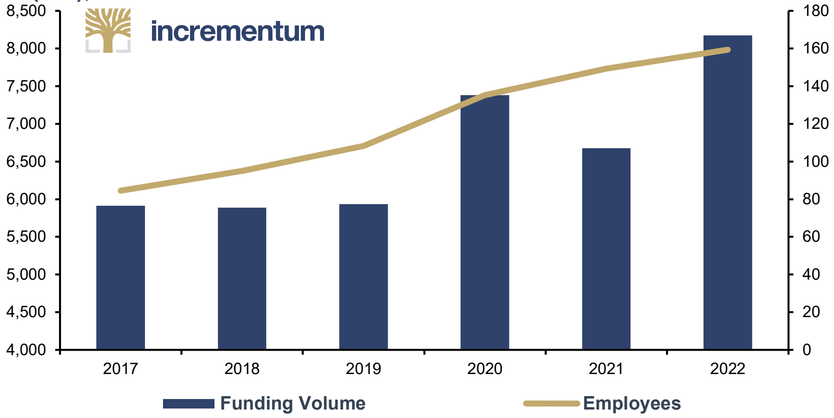
[25] The short version of our interview with Zoltan Pozsar is part of this *In Gold We Trust* report, *see* "Exclusive Interview with Zoltan Pozsar: Adapting to the New World Order". The long version is available here.
[26] *See* "Yield Curve Control, the Biggest Mistake of the ECB So Far! – Exclusive Interview with Russell Napier," *In Gold We Trust* report 2021

KfW Growth: Funding Volume (lhs), in EUR bn, and Employees (rhs), 2017-2022



Source: KfW, Incrementum AG

Adjustment of the 2% inflation target and greenflation

In the *In Gold We Trust* report 2022, "Stagflation 2.0", we discussed in detail the occurrence and consequences of *greenflation*. The transition to renewable energies remains a strong inflation driver.

In the medium term, cost pressure from the green transition ("greenflation") will certainly be stronger. It will be related to both decarbonization and the transition itself.
Christine Lagarde

We also expressed our concern that price increases related to investments to combat climate change could potentially be removed from the CPI. Although this option is not currently being discussed, we continue to believe this is a realistic scenario, given the quasi-religious charge of the discourse.

On a similar matter, a number of economists have for some months now been proposing a higher inflation target. However, the discussion had already been opened by the IMF's then chief economist Olivier Blanchard in 2016, when he called for the inflation target to be raised to 4%. Jerome Powell recently rejected these calls – at least for the moment, one might add. After all, central banks have put themselves in a bind. In the words of Mohamed El-Erian,

> *"The world's most powerful central bank is now confronted with two unpleasant choices next year: crush growth and jobs to get to its 2 per cent target or publicly validate a higher inflation target and risk a new round of destabilized inflationary expectations."*

The more the state "plans" the more difficult planning becomes for the individual.
F.A. Hayek

Austrian economist Gabriel Felbermayr, director of the Wifo Institute, which was founded in 1927 by Ludwig von Mises and Friedrich A. von Hayek, also believes that central banks will soon abandon the 2% inflation target, at least *de facto*. And like many other economists, he is of the opinion that a 2% inflation rate without recession is not achievable in the foreseeable future. Although an inflation target of 3% seems as meaningless as one of 2%, the fear is that society will slowly become accustomed to higher inflation – much like the frog in the pot of slowly heating water.

Sound money melts under the heat of political necessity, whether that comes in the form of medical emergency, green emergency, inequality emergency or national security emergency.
Russell Napier

Germany has traditionally pursued a strict fiscal policy and can only override the self-imposed and constitutionally enshrined debt brake in exceptional emergency situations such as the pandemic. However, we observe a growing narrative that the fight against climate change could also be classified as such an emergency. Since climate change cannot be defeated within a short period of time, this would be tantamount to a lifetime free pass for new "climate debt".

Additional initiatives such as green tariffs or the EU climate tariff, the Carbon Border Adjustment Mechanism (CBAM), which aims to make it more difficult to import climate-damaging goods, will also increase inflationary pressure. In mid-April, the EU Parliament approved this protectionist plan, initially for imported steel and cement.

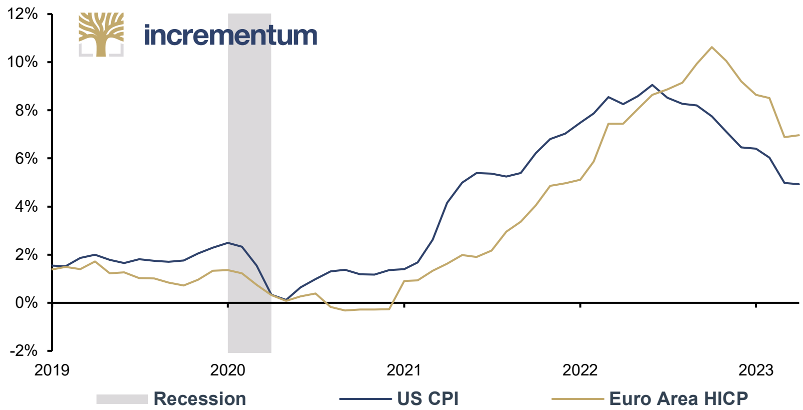
Public perception of responsibility for rising inflation

That's what he [Putin] is trying to do, cause chaos and destroy as much of Europe as he can... This energy crisis is causing massive inflation which we have to defeat.
Christine Lagarde

As long as the obvious link between the expansion of the money supply and widespread price increases is not recognized by the media and society, government officials and central bankers can continue to carry out their policies undisturbed and merely talk about the symptoms of inflation and how to combat them without fear of critical questions.

As already indicated, the Ukraine war and the associated bottlenecks in the energy sector further exacerbated inflation, but they by no means triggered it. After all, at the outbreak of the war, inflation in the USA was already well above 7% and in the eurozone above 5%.

US CPI and Euro Area HICP, yoy, 01/2019-04/2023



Source: Reuters Eikon, Incrementum AG

Even in the summer of 1923, many still argued that the essential reason for inflation was not the rotating printing press.
Frank Stocker

Similar circumstances already existed in the Weimar Republic. Ludwig von Mises emphasized that between 1914 and 1923, journalists, economists and politicians were prone to a serious economic error. Namely, they assumed that the expansion of the money supply would have no effect on the rise in commodity prices and the depreciation of the mark. Instead, balance of payments deficits, foreign currency speculators, and usury were blamed for the fall of the mark. The result was a population marked for decades by the monetary catastrophe of hyperinflation in 1923, and a Bundesbank that pursued a legendarily restrictive monetary policy after World War 2. One hundred years later, however, the lessons learned from the monetary catastrophe are increasingly being forgotten.

Fix the money, fix the world.
Marty Bent

As we all know, hope dies last. Social media and the Internet offer the younger generation in particular an opportunity to engage more intensively with the history of monetary policy and its effects. This represents a promising start. Nevertheless, we are still a long way from a transparent public discussion about the actual causes of inflation.

Long-term inflationary dynamics

More retirees, fewer workers

The world's demographic structure passed the point of no return twenty to forty years ago. The 2020s are the decade when it all breaks apart.
Peter Zeihan

Public debate is dominated by topics such as climate change, the energy transition, discrimination, and the welfare state, while reporting on demographic change and the associated challenges for pension systems remains below the perception threshold. Increased life expectancy is undoubtedly a welcome development. However, it poses considerable fiscal challenges to states, which we believe have received too little attention so far.

The last representatives of the baby boomer generation will retire in the coming years – and on a massive scale. **This epochal generational change will have the following effects:**[27]

1. The supply of labor is declining.
2. Demand for labor is rising and driving up wages.
3. Consumption will at least remain stable and retirees will deplete their savings, possibly leading to a higher velocity of circulation.
4. The pool from which states draw their taxes and social security contributions is getting smaller and smaller, while at the same time spending is rising.
5. The road to "gerontocracy": The rising number of retirees and the associated increase in the age of the median voter, which is decisive for electoral victory, increases retirees' political influence.

In particular, Europe, Japan and China are strongly affected by this problem. The USA is also confronted with a growing number of retirees at the same time that it has a stagnating working population; however, the USA "benefits" from the fact that average life expectancy is significantly lower than in other Western countries. **Perhaps we should consider the consumption of burgers, fries and soft drinks as an inflation-reducing tool.**

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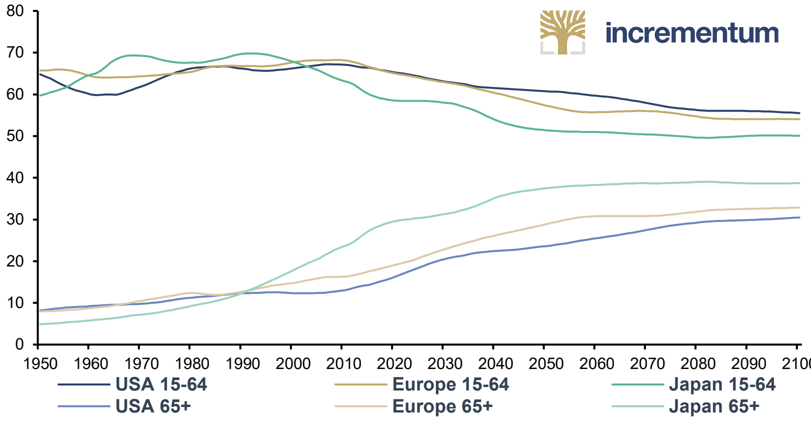
27 *See* "Global Demographics Turn Inflationary," *In Gold We Trust* report 2021

Age Group as % of Total Population, USA, Europe and Japan, 1950-2100



Source: United Nations, Incrementum AG

The fall of the Berlin Wall really demonstrated beyond the shadow of a doubt that there was a bad system….
Milton Friedman

After the fall of the Berlin Wall, globalization, with its expansion in the supply of goods and labor as well as favorable demographics, had a disinflationary effect. Many countries, including even the USA, ran budget surpluses for several years. We summarized our extensive analysis in the chapter "Global Demographics Turn Inflationary" in the *In Gold We Trust* report 2021 as follows:

> *"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.*
>
> *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."***[28]

Unsurprisingly, there have been riots on the streets of France for weeks after the retirement age was raised. Protests are as much a part of France's culture as wine, croissants, and PSG's early exit from the Champions League. But global demographic trends suggest that this may have been just the beginning.

Deglobalization, reshoring, and friendshoring

If goods don't cross borders, soldiers will.
Frédéric Bastiat

As a result of the pandemic and the Ukraine war, more and more voices were raised calling for a rethink of trade relations. Thus, supply chains should be diversified, shortened through backshoring, and secured by expanding trade relations with friendly countries. For example, the US government has passed the CHIPS and Science Act to promote the production of semiconductor chips domestically. Due to the much higher wage level in the West

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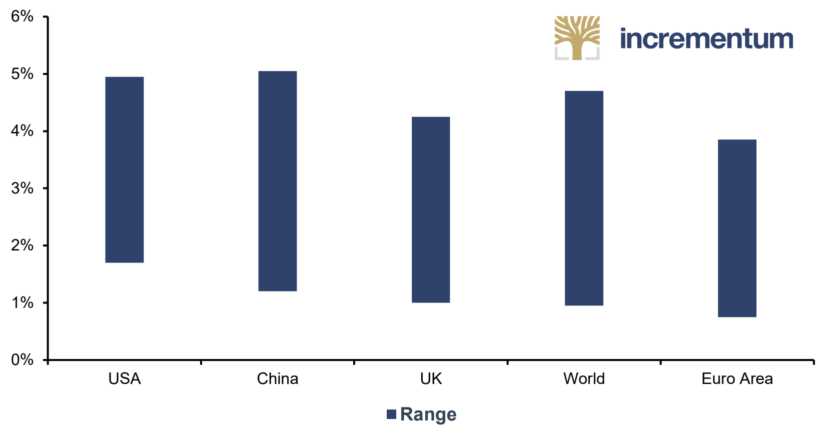
[28] "Global Demographics Turn Inflationary," *In Gold We Trust* report 2021, p. 127

and the already existing shortage of skilled workers, prices for consumer goods will therefore climb.

Since it is almost impossible to move all production onshore, there will most likely be a global fragmentation of value creation. Christine Lagarde is aware of this fragmentation dynamic, i.e. when geopolitical blocs trade mainly among themselves. It is expected that this deglobalization will lead to an increase in consumer prices of up to 4.8%. Whether this inflation will ultimately be included in the CPI calculation or a friendshoring adjustment factor will be introduced remains to be seen.

Nominal Impact of Trade Fragmentation on Consumer Prices



Source: ECB, Incrementum AG

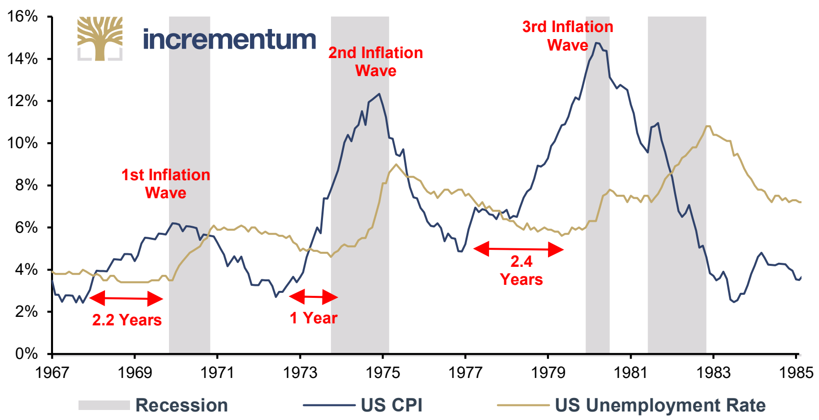
In many cases, a shift of production capacities back to the domestic market or, in a weakened form, the reduction of trade relations with hostile states, is likely to run up against very narrow limits for practical reasons, especially for the bloc that lacks raw materials. After all, even if new chip factories are built in the US or the EU, the question then arises as to where the raw materials needed for production will come from. **A look at the map showing the countries exporting the so-called *critical raw materials* (CRM) to the EU shows that friendshoring only moves the problem back one step in the production chain.**

Conclusion – Higher Inflation Waves and Greater Inflation Volatility Ahead!

We all know it's brutal up there at the front, especially those of us at the rear.
Arthur F. Burns

The mood in financial markets is largely influenced by the emotions of fear and greed. A growing sense of fear is currently spreading among central bankers, especially when comparisons are made to Arthur Burns, Chairman of the Federal Reserve from 1970 to 1978. Burns was not necessarily interested in addressing underlying causes, but he practiced symptom control. Burns' trick of removing goods classified as too volatile from the Consumer Price Index, so that only 35% of the original basket of goods remained, could find imitators again today. Ultimately, inflation was only broken under Paul Volcker with the help of an extremely restrictive monetary policy.

US CPI, yoy, and US Unemployment Rate, 01/1967-12/1985

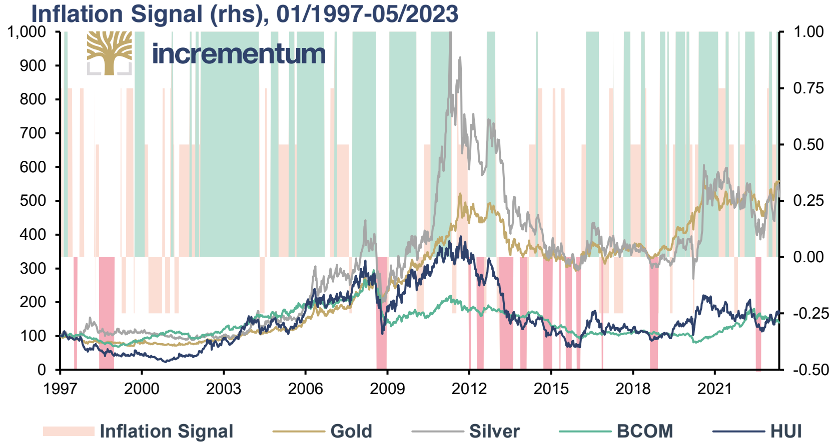


Source: Crescat Capital LLC, Reuters Eikon, Incrementum AG

What goes around, goes around, goes around
Comes all the way back around.
Justin Timberlake

In our baseline scenario, we assume a somewhat similar development as in the 1970s. To better understand the complex interaction between inflationary and deflationary forces, for our inflation-protection strategies we have created the *Incrementum Inflation Signal*. **This has been at its maximum level again since the beginning of April 2023, signaling rising inflationary tendencies.**

Inflation Sensitive Assets (lhs), 100 = 01/1997, and Incrementum Inflation Signal (rhs), 01/1997-05/2023



Source: Reuters Eikon, Incrementum AG

A clear conclusion to draw from our analysis is that energy, iron ore, sugar, and gold are likely the best choices to hedge against a high inflation environment. That said, even in a generally high inflation environment, it is critically important that investors get the direction of inflation right.
Marko Papic

As a rule, the *Incrementum Inflation Signal* indicates changes in inflation dynamics at a relatively early stage. It usually takes some time for consumer price inflation figures to start turning, as inflation figures are backward-looking and analyzed on a rolling 12-month basis. For example, after the initial disinflationary shock resulting from the Covid pandemic, our signal first indicated **rising inflation momentum in June 2020,** while the majority of market participants were discussing the deflationary threats we were obviously facing. Inflation statistics did not pick up until about nine months later. Even at the **beginning of July 2022, when inflation panic had reached its peak**, our proprietary inflation indicator, shifting to its minimum level, **signaled the strongly disinflationary tendencies early on**. Since then, the CPI inflation rate in the US has almost halved, and inflation rates in Europe have sharply declined.

Ch-ch-Changes
Oh, look out you rock 'n rollers.
David Bowie

The new inflation volatility regime is also noticeable in the *Incrementum Inflation Signal*. Due to the increased inflation volatility, our inflation indicator has shown an above-average number of signal changes in the past 2 years, while the methodology of the indicator has remained unchanged.

The inflation beast is harder to tame than we had assumed.
Allison Schrager

We see the structural inflation trend, which recently paused due to disinflationary forces (slowing economic cycle, rising interest rates, QT), remaining intact in the medium to long term. Moreover, the current signal is also compatible with our baseline scenario for this decade, in which we continue to see inflation figures well above the defined (average) target level of 2% due to the factors mentioned above, with increased inflation volatility.

In summary, the current showdown between various disinflationary and inflationary forces can be summarized as follows:

2022 disinflationary, 2023 inflationary

- Depletion of the US Strategic Petroleum Reserve, which now needs to be replenished.
- The reopening of the Chinese economy after the Covid-19 lockdowns
- Price caps and temporary tax cuts

Short-term disinflationary dynamics

- Quantitative tightening
- Interest rate hikes
- Negative money supply growth
- Disinflation in financial markets and possible recession
- Tightening of lending standards

Medium- and long-term disinflationary dynamics

- Global supply chain recovery from lockdowns
- Technology and innovation

Short-term inflationary dynamics

- Higher interest burden (especially on the corporate side)
- Price increase/supply shortage spiral
- Emptying the US Treasury General Account

Medium-term inflationary dynamics

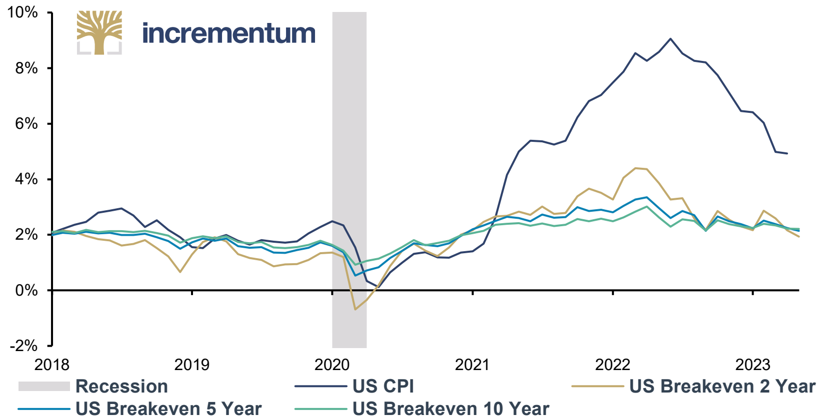
- Structural government debt
- Government-backed credit guarantee schemes
- Possible adjustment of the 2% inflation target
- Structural inflation due to greenflation

Long-term structural inflationary dynamics

- Demographic change
- Deglobalization, domestic relocation/friendshoring
- Increasingly expansionary fiscal policy
- Geopolitical tensions, war

As in the fall of 2020, we forecast significantly higher inflation than current break-even rates suggest. We believe that the market for inflation-linked bonds and thus for inflation expectations is still dominated by *"Great Moderation"-thinking*. We are now in a situation, in the waning of the first wave of inflation, where the upside risk of inflation is misjudged.

US CPI and Various US Breakeven Rates, yoy, 01/2018-05/2023



Source: Reuters Eikon, Incrementum AG

Raising rates exacerbates deficit-driven inflation. Cutting rates encourages more lending-driven inflation.
Lyn Alden

Long-term inflation expectations among market participants currently remain subdued. While the 5-year, 5-year forward inflation expectation rate is currently at around 2.27%, Michigan inflation expectations for the next five years are at 3.2%. **From our point of view, the market clearly underestimates the risk of a second inflation wave.**

5-Year, 5-Year Forward Inflation Expectation Rate and Michigan 5-Year Inflation Expectations, yoy, 01/2003-05/2023

Source: Reuters Eikon, Incrementum AG

There is a solution to the poor demand for Treasuries, which is QE under the "guise" of yield curve control, which my instinct says will come by the end of 2023 to control where U.S. Treasuries trade versus OIS.
The put is dead, long live the put!
Zoltan Pozsar

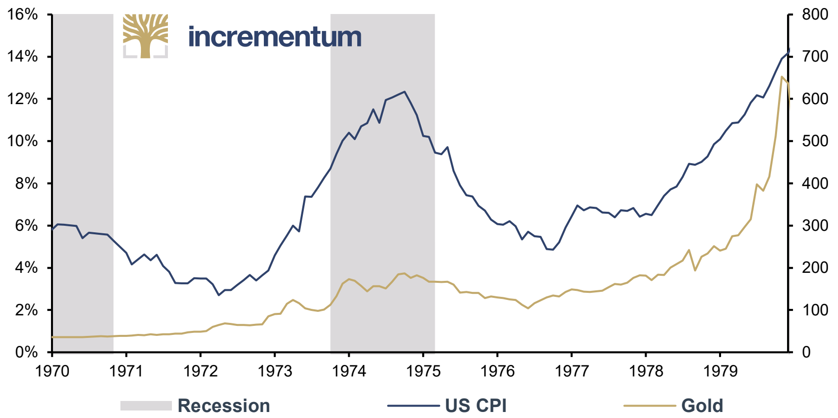
Ultimately, the question for us is *when* we will observe the next stage of cooperation between monetary and fiscal policy, not *if*. Japan can give us a glimpse into the monetary policy future here. Yield curve control measures and the bailout of a zombified corporate bond market will be necessary to control forces in financial markets, as will renewed intervention in the mortgage-backed bond market.

In the 1990s, the Federal Reserve still had a considerable influence on Bill Clinton's fiscal policy through its monetary policy. Alan Greenspan promised at the time to lower interest rates if government deficits were reduced – and it worked.

Since the beginning of the Covid pandemic, however, there has been a paradigm shift: **The fiscal policy stance now determines monetary policy, and deficits that cannot be absorbed by the market must be monetized to prevent a (sharp) tightening of yields.** Among the industrialized-nation central banks, the BoJ is clearly the master of this dubious trade, but the Federal Reserve has not been lax in recent years, either.

A potential second wave of inflation could lead to a significant increase in long-term inflation expectations within the population, as inflation expectations become unanchored. **Growing loss of confidence in fiat money has historically had a very positive effect on the gold price.**

US CPI (lhs), and Gold (rhs), 01/1970-12/1979



Source: Reuters Eikon, Incrementum AG

Inflation is a regression of consciousness into unconsciousness.
Carl Jung

One thing is certain: There are numerous signs that the showdown between disinflationary and inflationary forces will be decided in favor of another wave of inflation. Inflation-protected investors will be able to let themselves be carried along on the more-volatile waves of inflation. For everyone else, it's a case of holding your breath for as long as possible.

Status Quo of Gold Demand

Colossal gold buying from central banks, that's the big standout headline from the gold market in 2022.

John Reade, Chief Market Strategist at the World Gold Council

- **2022 saw the highest gold buying by central banks on record, i.e. since 1950, when the WGC started its records. The buying reached 1,136t, with Türkiye reporting the largest purchases, adding 148t to its reserves.**

- **In November and December 2022 the PBoC announced official gold purchases of 62t in total, lifting its total gold reserves to over 2,000t. China remained a buyer in Q1 2023, adding another 58t.**

- **Egypt (47t), Qatar (35t), Uzbekistan (34t), Iraq (34t), India (33t), the United Arab Emirates (25t), Oman (2t), the Kyrgyz Republic (6t), Tajikistan (4t), Ecuador (3t), the Czech Republic (1t), and Serbia (1t) also boosted their gold reserves.**

- **The WGC reported "substantial" unreported purchases from institutions, amounting to roughly 50% of all purchases. Not all countries report their gold purchases regularly, including China and Russia.**

- **Bar and coin demand had a record year in Western countries, spurred on by turmoil in financial markets.**

- **Total gold demand is expected to remain resilient and robust, with varying demand across sectors backed by strong central bank buying into 2023.**

- **Gold-backed ETFs, although remaining net negative, saw slowing outflows during the year 2022 and into 2023.**

I don't follow the records, but the records follow me so it's good.
Cristiano Ronaldo

We will now turn to the most important developments for gold demand, with our focus on central bank demand and investor demand. For further insights, we recommend the World Gold Council's *Gold Demand Trends*, which is always worth studying. We will start our journey with the astonishing development of central banks' gold demand, which was record-breaking last year.

Central Bank Gold Demand

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

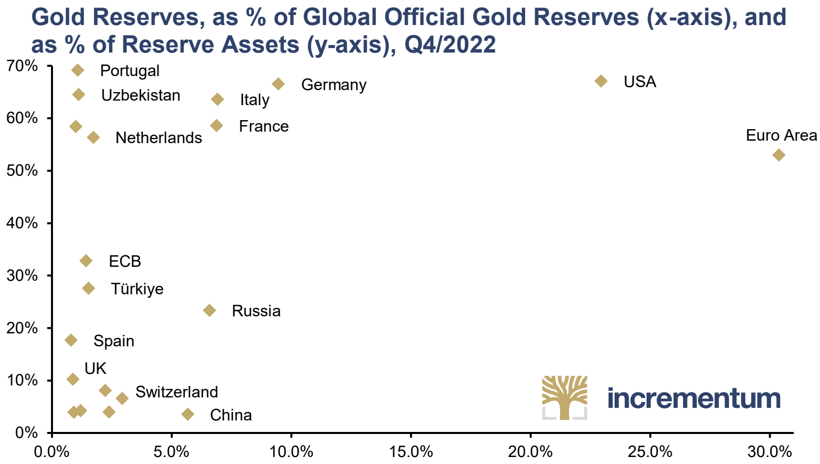
First, let us remind ourselves why it is that central banks hold gold in reserve. The IMF published a working paper in January 2023 entitled "Gold as International Reserves: A Barbarous Relic No More?" **In this article, the authors, including the renowned economic historian Barry J. Eichengreen, highlight two potential explanations for why central bank gold demand has increased over the last decade:**

- First, gold is seen as a safe haven and desirable reserve asset in periods of high economic, financial and geopolitical uncertainty and when returns on reserves currencies are low.
- Second, gold is perceived as a safe and desirable reserve asset when countries are subject to financial sanctions, and when financial assets are potentially subject to freezes and seizure**.**

The most recent WGC *Annual Central Bank Survey* also highlights two key drivers of central banks' decisions to hold gold: **its performance during times of crisis and its role as a long-term store of value.** Let's take a moment to step back and gain a broader perspective on central bank gold holdings before delving into the events of 2022 and Q1 2023.

They carry gold, not paper dollars.
The Good, the Bad and the Ugly

Among all nations, the USA continues to hold the largest quantity of gold, followed by Germany, Italy, France, Russia, and China. While gold holdings constitute a significant portion of the reserves of these Western nations, the percentage of gold reserves relative to the total reserves of Russia and China is only around 24% and 3.5%, respectively. Interestingly, these two nations, in particular, have shown increased demand for gold as a reserve asset in recent years.



Source: IMF, World Gold Council, Incrementum AG

Key Developments in 2022 and Q1/2023

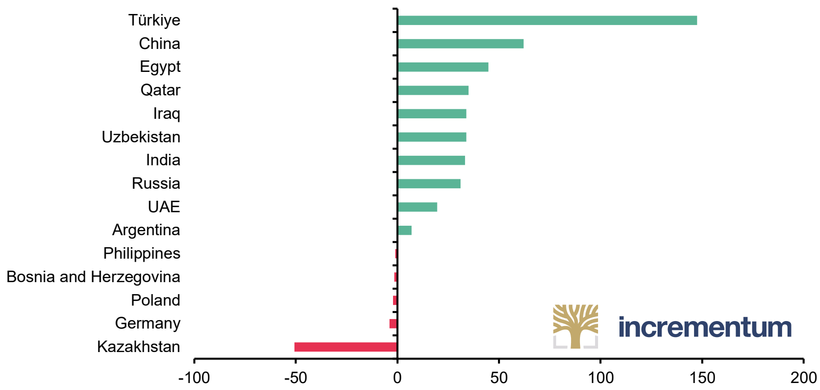
If you're offered a seat on a rocket ship, just get on!
Sheryl Sandberg

It is not often that we see numbers that could be described as *parabolic* in the gold industry, but central bank purchases of gold in 2022 represent such an occurrence. We saw inflows of 1,136 tonnes for the year, according to the World Gold Council. This is a 145% increase from 2021 net inflows of 463 tonnes. It is also a new record for a single year, and an astonishing 70% higher than the previous record year of 2019, which saw purchases of 668 tonnes.

Worth noting is that the majority of purchases came in the second half of the year, indicating that this could have been a direct reaction by central banks to the freezing of Russia's FX reserves.

The largest purchaser of gold in 2022 was Türkiye, which increased its reserves by 148 tonnes to 542 tonnes. Türkiye has been struggling with high inflation and a weak Turkish lira for a number of years, and has been purchasing gold in order to strengthen the central bank's foreign currency needs. India added 33 tonnes in 2022, after adding 77 tonnes in 2021.

Central Bank Gold Purchases/Sales, in Tonnes, 2022



Source: World Gold Council, Incrementum AG

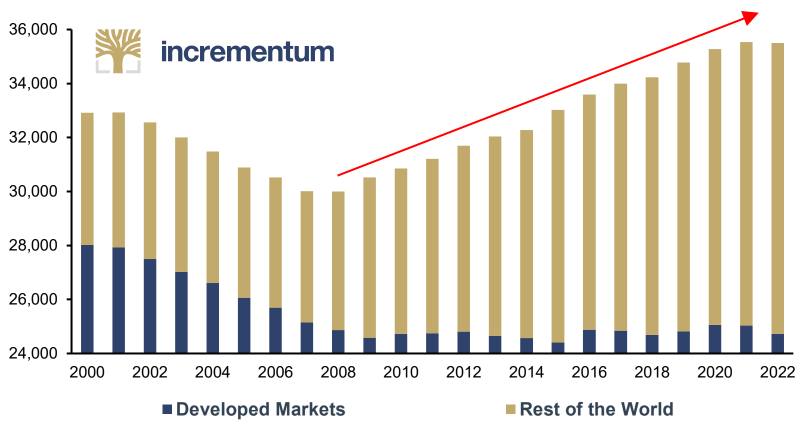
A good lawyer, just like a good poker player, must always keep his cards close to his chest.
Mallika Nawal

We often see long periods of no purchases by the PBoC and then a sudden large increase in reserves. This suggests that they buy more or less continuously but only report every now and then. The PBoC wants to show the world they are buying gold now to catch up with the West, to support renminbi internationalization, and to move away from the US dollar. On the other hand, they don't want to disclose too much, or they would rock the gold market and drive the price up, which is not in their interest, at least for now.

It's no coincidence that China has just started to publish their gold purchases again. They are putting the world on notice that they have an international currency.
Willem Middelkoop

Prior to November 2022, the last time China announced a monthly addition to its monetary gold reserves was a whopping 37 months ago, in September 2019, when the PBoC added 5.91 tonnes of gold. That was the tail-end of a 10-month period, starting in December 2018, in which the Chinese central bank claimed to have added a total of 105.8 tonnes. They added 62 tonnes in November and December 2022 and have added 58 tonnes so far in 2023.

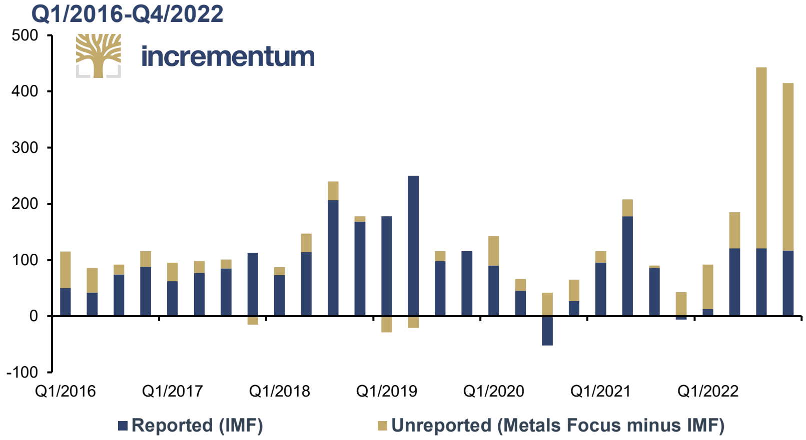
Global Central Bank Gold Reserves, in Tonnes, Q4/2000-Q4/2022



Source: World Gold Council, Incrementum AG

Astute readers will notice that the reported numbers from central banks (584 tonnes) add up to far less than the total amount purchased by central banks (1,136 tonnes). When asked about this discrepancy in a recent interview, a representative from the World Gold Council, Shaokai Fan, said, "*We know who those central banks are, but we will never front run a central bank in reporting their gold purchases*".

Central Bank Gold Demand (Reported vs Unreported), in Tonnes, Q1/2016-Q4/2022



Source: IMF, Metals Focus, World Gold Council, Incrementum AG

Interestingly, not reporting purchases seems to be a new trend among central banks, and we cannot help but wonder who they might be. Considering that such immense amounts were purchased amid the current geopolitical turmoil, the list has to include large nations.

Central Bank demand will become the main driver of this next bull market. In the 1980s, gold as a percentage of reserves was 75%+. Will it go back to that level? Probably not. But it could easily double to 40% over the next decade.
Kevin Muir

Strong demand from central banks continued into 2023, with Q1/2023 central bank purchases adding up to 228 tonnes, a new record for Q1 and 34% higher than the previous Q1 record set in 2013. Four central banks accounted for the majority of reported purchasing during Q1, with the Monetary Authority of Singapore (MAS) being the largest single buyer during the quarter with the addition of 69 tonnes. The PBoC purchased another 58 tonnes, Türkiye added 30 tonnes, and India 7 tonnes. Q1/2023 also saw modest selling of gold reserves from central banks, with Kazakhstan (-20 tonnes) and Uzbekistan (-15 tonnes) being the largest sellers. Both these countries purchase gold domestically and, as discussed above, are among the largest gold holders by reserve percentage.

We further discuss central bank gold holdings and the impending showdown between the West and the East in the chapter "The Rise of Eastern Gold Markets: An Impending Showdown with the West".

Investor Demand

What can investors do? For once, the old trope may not be ill advised: buy gold. Many of the world's central banks will surely be doing it.
Jon Sindreu

We now take a closer look at investor demand, focusing on private investment demand and ETF demand. In 2022, gold demonstrated how its various sources of supply and demand can offset each other, resulting in stable performance as an investment. **Total investor demand for 2022 is up by a healthy 10% on the back of strong bar and coin demand in 2022 and a slowdown in ETF selling.**

Global Gold Investment Demand, 2021-2022

	2021	2022	yoy
Investment	**1,001.9**	**1,106.8**	**10%**
Bar and Coin	1,190.9	1,217.1	2%
India	186.5	173.6	-7%
China	285.5	218.2	-24%
Gold ETFs	-189.0	-110.4	-

Source: Metals Focus, World Gold Council, Incrementum AG

Demand for bar and coin in the latter part of the year was notably robust, with two consecutive quarters of demand reaching approximately 340 tonnes, which is with one exception the highest quarterly figure since 2013. **The desire to safeguard wealth in the face of worldwide inflation remained a significant incentive for buying gold as an investment.**

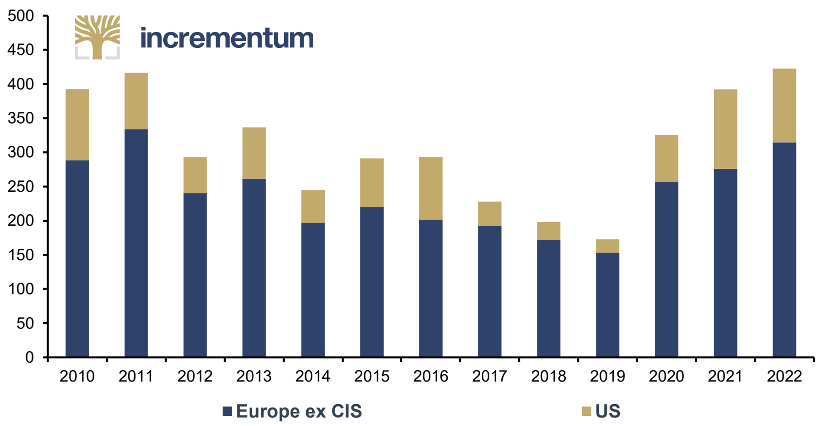
Inflation will prove intractable because the central bankers cultivate it, Wall Street needs it and the voters elect it.
James Grant

Bar and coin demand in China for full-year 2022 was down 24% to 218 tonnes, due mainly to Covid-related restrictions throughout the year. India saw bar and coin demand down 7% to 174 tonnes on the back of an exceptionally strong 2021, with jewelry demand taking a front seat. Türkiye (+38%) and the Middle East (+42%) reported robust demand for bar and coin on the back of extreme inflation and depreciation of local currencies, especially in Iran and Egypt.

Acquiring gold is not an investment. It is a conscious decision to REFRAIN from investing until an honest monetary regime makes rational calculation of relative asset prices possible.
Andreas Acavalos

2022 saw a historic peak in the purchase of tangible gold items by investors in the West. The acquisition of gold bars and coins in the US and Europe combined amounted to 427 tonnes, surpassing the previous high of 416 tonnes set in 2011. Annual European investment was up 14% to 314 tonnes. We saw large purchases in Germany and certain parts of Eastern Europe, particularly in Poland, supported by persistent concerns about high inflation, a potential recession, the ongoing Russia/Ukraine conflict, and local currency movements.

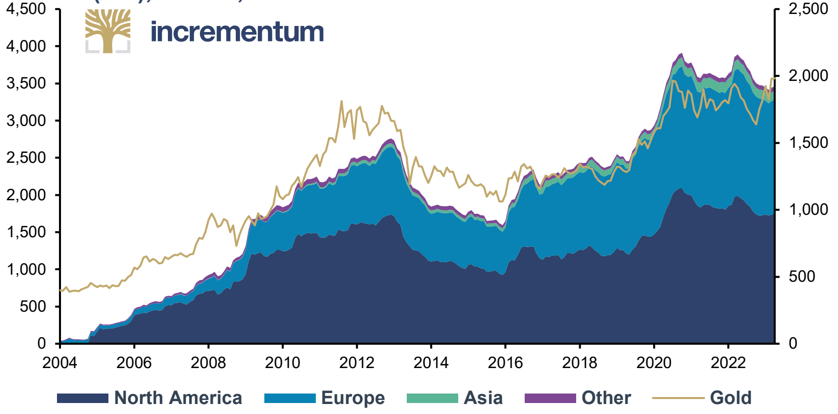
Gold Demand by Western Retail Investors, in Tonnes, 2010-2022



Source: World Gold Council, Incrementum AG

During 2022, we saw a 3% decrease in holdings of physically backed gold ETFs, which amounts to a decline of 110t, equivalent to outflows of USD 3bn. Although there was a surge in demand for these products in the first four months of 2022 due to heightened geopolitical risk, the gains were gradually reversed as aggressive interest rate hikes by central banks began to dominate the economic headlines. Funds listed in North America (-75t) and China (-21t) saw the biggest falls in demand, while European funds (-15t) reported stable demand through the year but ultimately slipped lower during Q4/2022, ending the year 1% lower.

Accumulated Gold ETF Holdings by Region (lhs), in Tonnes, and Gold (rhs), in USD, 01/2004-04/2023



Source: World Gold Council, Incrementum AG

The March banking crisis spurred Q1/2023 ETF demand in North America, which added 10 tonnes; yet we saw outflows in Europe (-40 tonnes) while Asian-listed gold ETFs saw modest declines (<1 tonne).

Excursus: An entirely new kind of coin… the Crypto Vreneli

Photo credit: philoro

Gold, especially physical gold bars and coins, is often regarded as old, boring and not innovative. Our friends at philoro have introduced an entire new type of gold coin. **The Gold Vreneli is a Swiss coin that was minted from 1897 to 1949 and is a popular bullion coin in Switzerland. It is known for its purity and high-quality design.**

Philoro has now resurrected this coin for the digital age. The limited edition Crypto Vreneli is a contemporary take on this traditional gold coin. This product blends tradition and the avant-garde, appealing to those who value open-mindedness, forward thinking, and investing in inflation-resistant assets like gold.

Thinking ahead is highly valued in Swiss everyday life, whether you are making plans, or catching a bus.
Margaret Oertig-Davidson

The Crypto Vreneli combines a traditional gold coin with NFT technology. It is a gold coin that carries an NFC chip. When read with a mobile app, one is referred to a digital asset in a blockchain that is immutable and non-exchangeable. **This new gold coin represents the fusion of two asset classes: physical and digital, making it the world's first "Phygital Asset Coin" (PAC).** This collaborative innovation is produced in Switzerland and is likely to attract attention from investors, tech geeks and art collectors alike.

One should either be a work of art, or wear a work of art.
Oscar Wilde

On March 31, 2023, Philoro released a limited edition of 100 Crypto Vreneli. Each is initially sold as a physical gold coin, packaged in a collector's box. The Crypto Vreneli's NFT is paired in an Ethereum digital wallet connected to the coin. The coins are available for purchase on Philoro's online stores, with delivery options to Switzerland, Austria and Germany, as well as in Philoro's 16 brick-and-mortar stores in Europe. Each coin is made of pure gold, weighing 31.1 grams.

Jewelry demand

Worldwide jewelry demand decreased by 3% to 2,086 tonnes in 2022 on the back of very weak Chinese demand that came in at only 571 tonnes (-15%), 113 tonnes less than the 10-year average. This is almost fully attributed to Covid-19 disruptions in the nation, as authorities had implemented a strict zero-Covid policy throughout 2022. That lag was however offset by exceptionally strong demand in the Middle East (+15%), Türkiye (+8%), and Southeast Asia, where almost all countries saw increased demand, most notably Vietnam (+51%) and Thailand (+17%).

It is always the same: women bedeck themselves with jewels and furs, and men with wit and quotations.
Maurice Chevalier

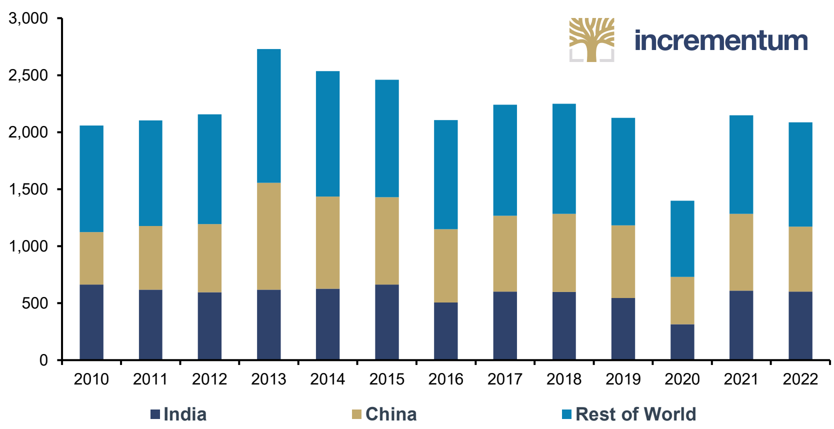
Despite a 4% decline, US jewelry demand remained healthy at 144 tonnes in 2022. The drop was largely observed in the second half of the year, due to the removal of government support packages and a shift in consumer spending from luxury goods to services. The threat of domestic recession also contributed to the decline, with a 5% yoy decrease to 51 tonnes in Q4/2022. However, the demand remained above pre-pandemic levels, and comparisons were made against the strong volumes of 2021.

In contrast, European jewelry consumption increased by 4% to 71 tonnes in 2022, almost reaching pre-pandemic levels. However, Q4/2022 demand decreased by 5% yoy to 31 tonnes, ending six consecutive quarters of growth. The decline was mainly due to significant losses in the UK, where the underperforming economy compounded the impact of the cost-of-living crisis.

If India sneezes, the gold industry will catch a cold.
Ajay Mitra, World Gold Council

Despite a 2% decline in demand from India in 2022, the annual total of 600 tonnes was strong and consistent with the average over the preceding 10 years. High and rising local gold prices posed a challenge at times during the year. Q4/2022 demand fell by 17% yoy, but this was set against the record high level in Q4/2021. The festive period during the first half of the quarter saw exceptionally strong demand, with sales around 20% higher yoy, indicating robust sentiment. Demand also received a boost from wedding purchases. However, the momentum was disrupted as gold prices surged in November and December 2022. Customers preferred gold-for-gold exchange, and exchange volumes nearly doubled during the quarter. Higher prices also encouraged higher recycling volumes.

Global Gold Jewelry Demand, in Tonnes, 2010-2022



Source: World Gold Council, Incrementum AG

The first splurge that I did, I bought, like, an $80,000 watch, but that's because I'm a rapper. I need jewelry.
Cardi B

Q1/2023 saw jewelry demand in China returning, but remaining relatively flat when compared to Q1/2022, with less buying in India. This could be due to high and volatile gold prices being a challenge for Indian consumers.

Global Gold Jewelry Demand, Q1/2022-Q1/2023

	Q1/2022	Q1/2023	yoy
World Demand	475.3	477.9	1%
India	94.2	78.0	-17%
China	177.4	197.7	11%

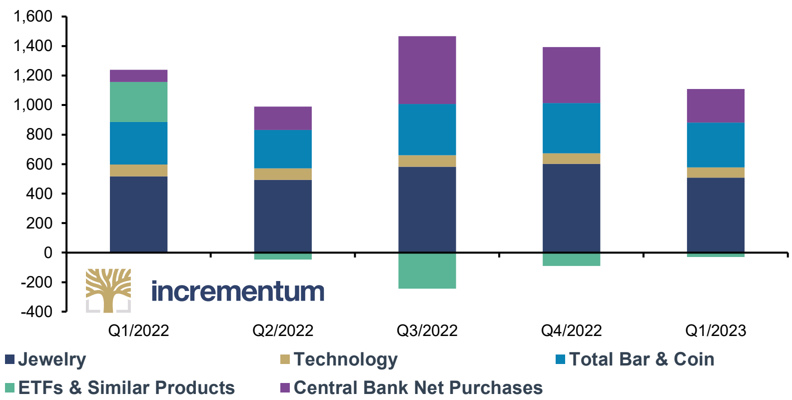
Source: World Gold Council, Incrementum AG

Conclusion

Given the unattainability of perfect robustness, we need a mechanism by which the system regenerates itself continuously by using, rather than suffering from, random events, unpredictable shocks, stressors, and volatility.
Nassim Nicholas Taleb

The strength of gold demand has been fueled by a buying spree among central banks, robust demand in the jewelry market, and increased purchasing in the bar and coin market. Looking ahead, we anticipate that central banks will maintain their demand for gold well into the future. As China has finally lifted its Covid-19 restrictions, we can also expect a rebound in jewelry demand, although it is important to note that rising gold prices may have a dampening effect on this sector. Despite this potential hurdle, the outlook for the gold market remains positive, with the factors supporting demand likely to continue driving growth in the years to come.

Global Gold Demand by Sector, in Tonnes, Q1/2022-Q1/2023



Source: Metals Focus, World Gold Council, Incrementum AG

Eagles ignore weather reports because they can fly above any storm.
Matshona Dhliwayo

The events of 2022 have highlighted the remarkable resilience of gold. As some markets have diminished, others have stepped up to take their place. **We interpret that as a clear sign of a robust and healthy market**. The ability of gold to weather changing circumstances and remain a reliable store of value is a testament to its enduring appeal among investors and consumers alike.

Conclusion: Status Quo

To understand the path of inflation from here, we will have to read more history…. if trust drove globalization, and globalization drove "The Great Moderation", distrust will drive de-globalization, and de-globalization "The Great Reflation".

Zoltan Pozsar

- **As we predicted in the *In Gold We Trust* report 2021, inflation picked up significantly in 2022. However, contrary to our expectations, the gold price in US dollars developed less favorably. Since the beginning of the year, though, gold is clearly up in all currencies, including the US dollar.**

- **Due to increased inflation volatility, the correlation between stocks and government bonds is likely to remain positive. This could catch many portfolio managers on the wrong foot.**

- **The commodity bull market is currently taking a breather, but we believe that the secular bull market is still unharmed.**

- **Is gold already too expensive? In an inflation-adjusted view, the real all-time high from 1980 of more than USD 2,546 is still far away.**

- **Despite massive price increases for Oktoberfest beer, the popular gold/Wiesnbier ratio has risen slightly to 123 Maß Oktoberfest beer per ounce of gold. So even in times of inflation, beer lovers with an affinity for gold are not left high and dry.**

- **Our new iPhone/gold ratio shows that one had to pay 0.92 ounces for the first iPhone in 2007, they now pay just 0.75 ounces, despite the fact that the iPhone's technical features have improved massively over the last 15 years.**

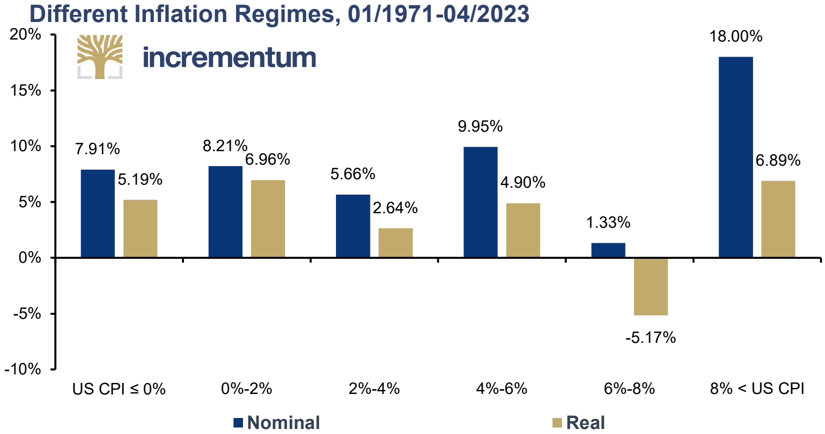
After our tour through the diverse gold universe, let's conclude by summarizing the most important thoughts.

The year 2023 has so far been more than pleasing for friends of the yellow metal. Even in terms of the US dollar, gold has shaken off the weakness of the previous year and has been clearly positive since the beginning of the year. One almost has the impression that gold wants to "apologize" in 2023 for its disappointing performance in the previous year, in view of the high inflation figures.

If we have entered a period of positive stock/bond correlation, it's important that portfolio managers, fiduciaries, investment advisors, and investors prepare themselves for either increased volatility or decreased returns for their traditional portfolios.
Kevin Muir

If we broaden our view in terms of time, it becomes clear beyond doubt that gold generally not only protects the investor's capital, both in nominal and real terms, but also increases it, as our assessment shows. This effect was strongest in months with annual inflation, as measured by the US Consumer Price Index, between 0% to 2% or above 8%. During periods of elevated to high inflation, gold nevertheless protected the investor; but interestingly, it showed all its luster during normal as well as extreme periods. The exception is the phases with annual price increases of 6% to 8%. However, this result is distorted by a handful of months in 1973, 1975 and 1982 when gold lost more than 10% each.

Nominal and Real (US CPI Adjusted) CAGR for Gold during Different Inflation Regimes, 01/1971-04/2023



Source: Reuters Eikon, Incrementum AG

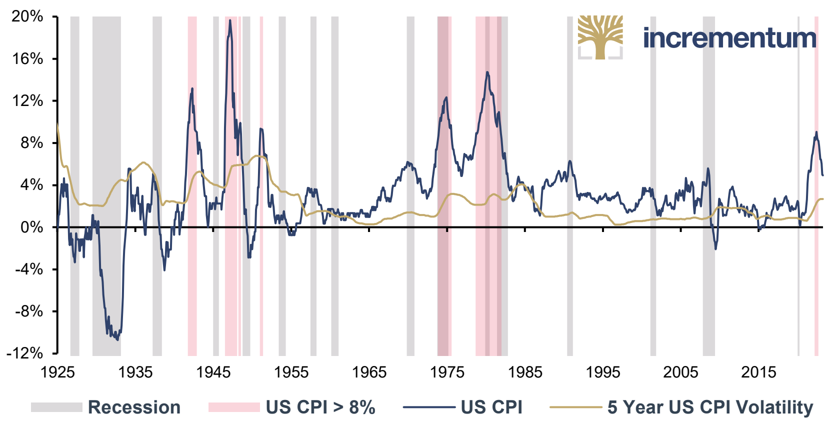
One of the biggest taxes is one that is not even called a tax – inflation.
Thomas Sowell

In addition, there is another, often forgotten aspect: In many countries, gains from gold investments are tax-free, at least after a certain holding period. This additionally increases the performance of gold compared to conventionally taxed asset classes.

Investing for inflation volatility is not the same thing as investing for inflation. Confusion in this respect will be costly to investors.
Henry Maxey

As we explained earlier, we expect high inflation volatility and at least one more wave of inflation in the coming years. In many places, however, the idea is currently beginning to spread that inflation has already been defeated and that we will return to the comfortable times of the Great Moderation. Hoping for this is not forbidden, but realistic this hope is not.

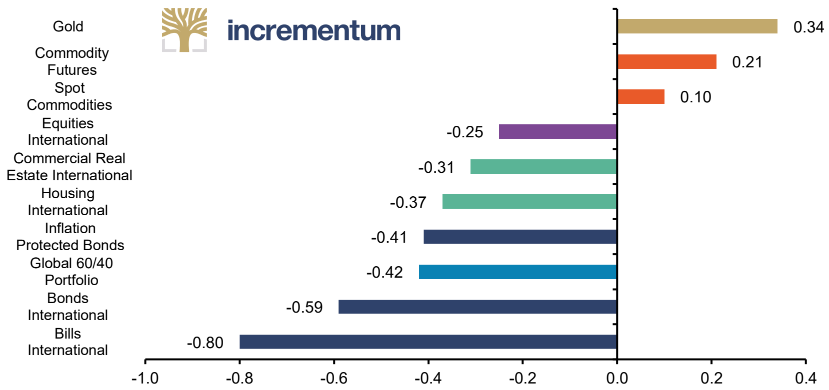
US CPI, yoy, and 5 Year US CPI Volatility, 01/1925-04/2023



Source: Reuters Eikon, Incrementum AG

Due to increased inflation volatility, the correlation between stocks and government bonds is likely to remain positive. This could catch many portfolio managers on the wrong foot.

Correlation of Inflation and Real Returns for Various Asset Classes, 1900–2022



Source: Credit Suisse, Incrementum AG

Diversification that works.
World Gold Council

Loyal readers know: We do not view gold as the answer to all questions or the solution to all problems. Rather, we focus on analyzing and presenting gold's unique portfolio characteristics. We see gold as part of a diversified portfolio. With this in mind, the WGC statistics below show that gold reduces portfolio volatility and maximum drawdowns while increasing risk-adjusted returns. This is the result of comparing an average hypothetical USD portfolio to an analogous portfolio with a 5% gold allocation over the last 3, 5, 10 and 20 years in US dollar terms.

USD Portfolio with 0% and 5% Gold Allocation

	3 years		5 years		10 years		20 years	
Gold Allocation	0%	5%	0%	5%	0%	5%	0%	5%
Annualized Return	2.3%	2.5%	3.7%	3.9%	5.3%	5.1%	6.8%	6.9%
Annualized Volatility	13.2%	12.7%	11.3%	10.9%	9.0%	8.7%	9.7%	9.5%
Return to Risk	17.3%	20.0%	33.0%	36.4%	58.6%	58.9%	69.4%	73.0%
Maximum Drawdown	-19.9%	-19.3%	-19.9%	-19.3%	-19.9%	-19.3%	-35.3%	-33.0%

Source: World Gold Council, Incrementum AG

Policymakers' long-held belief that supply curves are elastic has been undone by the pandemic, climate change, geopolitics and a host of other factors. This represents a massive change within the global investment environment. Aggregate supply curves may now be near vertical – a recipe for stagflation over the medium term. This also suggests that the world will switch from one of cooperation and collusion to one of competition.
Alexander Stahel

Back in the *In Gold We Trust* report 2019, we predicted a renaissance in the commodities sector. The commodity bull market is currently taking a breather, but we believe that the secular bull market is still unharmed. A look at the history books reveals: wars are often a trigger or amplifier for commodity cycles. There are numerous reasons for this. Driven by the arms industry, aggregate demand picks up in wartime, while at the same time trade relations with the enemy are cut back. In addition, war-induced budget deficits fuel inflation, in extreme cases to the point of hyperinflationary destruction of the currency. The hyperinflations in Germany, Austria, and Hungary after World War I, which were (are) 100 years old last year and this year, are an example of the catastrophic economic consequences of war and its financing via the printing press.

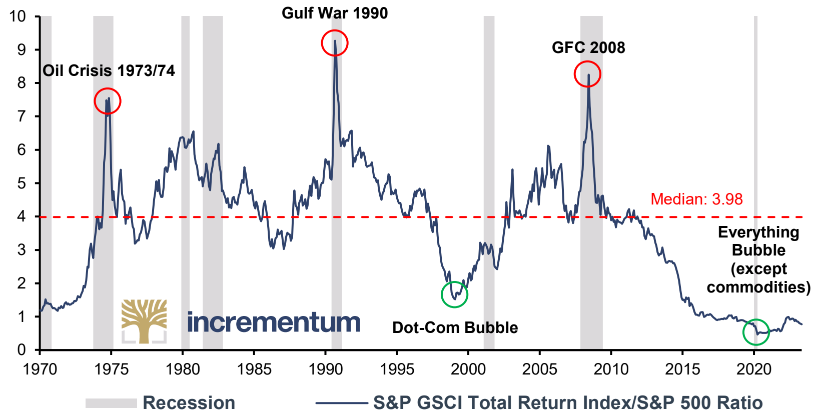
However, non-war factors also argue for a continuation of the commodity bull market:

- For ten years, commodities were in a bear market, resulting in a significant backlog of investment and declining production volumes. This structural supply bottleneck hedges the downside price risk.
- This disinvestment cycle and capacity reduction in the raw materials sector is now manifesting itself in the form of structural supply bottlenecks. The share of total investment in the mining sector in global GDP remains low and is less than half of what it was at the beginning of the 2010s.
- The increasing focus on generous fiscal support measures and the energy transition with its huge need for investment will stimulate the commodity sector much more strongly and directly than during the various QE rounds.
- (Institutional) investors are underweighted or not invested at all in commodities. Commodities – and real assets in general – will gradually resume their historical role as a safe haven and will therefore increasingly be used as *satellite investments*.
- Latent inflation concerns will continue to provide a tailwind for commodities.
- Geopolitical tensions will further promote resource nationalism and demand higher geopolitical risk premiums.
- The US dollar could be facing a secular bear market as its hitherto status as an unchallenged reserve currency gradually fades. Historically, the US dollar and commodity prices have been strongly negatively correlated (-0.86).

Only buy something that you'd be perfectly happy to hold if the market shut down for 10 years.
Warren Buffett

Now let's 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.[29] It impressively shows that the relative valuation of commodities compared to equities remains historically extremely cheap and has just stabilized at this historically low level over the past few years. Compared to the S&P 500, the GSCI Commodity Index (TR) has barely recovered from its historical low of April 2020, and it has not yet been able to break out of the phase of extreme weakness since 2015. **The ratio currently stands at 0.87, which is miles away from the highs and still well below the long-term median of 3.98.**

S&P GSCI Total Return Index/S&P 500 Ratio, 01/1971-05/2023



Source: Torsten Dennin, Lynkeus Capital, Reuters Eikon, Incrementum AG

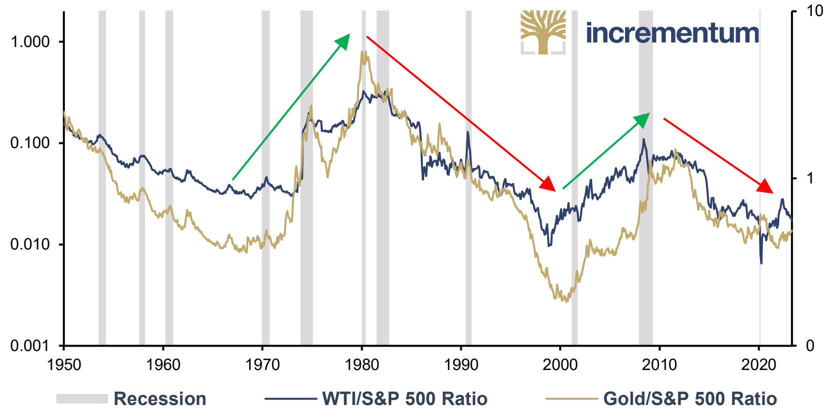
The new capex cycle will be discussed in this *In Gold We Trust* report in our interview with Russell Napier. Zoltan Pozsar, with whom we also conducted an interview for this *In Gold We Trust* report, also pointedly summarizes the reasons for such a new investment cycle:

> *"…the West will have to pour trillions into four types of projects, starting 'yesterday':*
>
> - *rearm (to defend the world order)*
> - *reshore (to get around blockades)*
> - *restock and invest (commodities)*
> - *rewire the grid (energy transition)."*

Given the next chart, we could see gold and oil outperforming the S&P over the next few years.

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

WTI/S&P 500 Ratio (lhs), and Gold/S&P 500 Ratio (rhs), 01/1950-05/2023



Source: Nick Laird, Reuters Eikon, Incrementum AG

Our system works on trust. It is the same whether that trust is in a person, company, or government. Remove trust and it affects the creditworthiness of an individual or company. Remove trust from a system and the entire system can unravel very quickly.
Jeff Booth

In our *In Gold We Trust* report 2019, we took an in-depth look at the topic of trust. Trust reduces complexity and makes portfolios more antifragile. It grows and thrives by repeatedly meeting expectations. **Gold has met these expectations in the wake of the Covid-19 crisis and the outbreak of the Ukraine war.** It is also apparent that the loss of confidence in the US dollar has led to much higher demand for gold from central banks. The record demand in 2022 could already be exceeded in 2023. This move into gold can be seen negatively, since it comes as states continue to decide whose political leadership they would like to see sanctioned, isolated, and overthrown. And indeed, there is a risk – but in our opinion a very small one – that gold in general could become a victim of geopolitical alienation.

However, one can also see the move positively, given that gold is a last-ditch mediator, bridge builder, and global trust anchor in difficult times, which helps prevent sharper economic disintegration and political confrontation. After all, the freezing of Russia's currency reserves by the US and the EU has shown the rest of the world that it cannot trust that it will be able to redeem its US dollar- or euro-denominated currency reserves in any case. And trust, once lost, is very difficult to rebuild. Therefore, an actual militarization of gold would probably have dramatic consequences for the remaining cohesion of the world, if a global emergency means of payment were lost at the international currency level.

The Fed must choose between fighting inflation and financial stability. If the Fed chooses the tight road, the financial markets will likely revolt, and eventually, gold will be the beneficiary. On the other hand, if the Fed chooses financial stability over fighting inflation, then gold wins too as monetary conditions loosen.
Kevin Muir

Central banks, too, are in danger of finally using up their trust capital as a result of their hesitant fight against inflation. Sometimes one gets the impression that they do not understand the gravity of the situation. Indeed, it is not at all uncommon for speeches by leading central bankers on the causes of the inflation crisis not to say a single word about *money supply growth* in. This reminds us of a carpenter who talks about his craft without uttering the words *wood* and *cut*.

Gold, on the other hand, is the basis of the unbacked credit pyramid: Gold is anticomplex.[30] This does not only mean that gold is physically mined and very stable in its globally available quantity; it also means that gold is an

-
30 *See* "The Enduring Relevance of Exter's Pyramid," *In Gold We Trust* report 2019

antifragile asset in an increasingly fragile and complex financial system. Gold is the tip of the monetary system and does not have any counterparty risk. Holding the precious metal is monetary insurance against an endogenously unstable monetary system. Gold will only reveal its true extent of robustness in the context of an accelerated devaluation of fiat currencies or a reorganization of the monetary architecture.

Exter's Pyramid: Global Market Cap of Asset Classes, in USD trn, 12/2021

Source: BIS, IIF, Savills Research, SIFMA, World Bank, World Gold Council, Jeff Desjardins, visualcapitalist.com, Incrementum AG
*as of 12/2020

Gold is the only way out for central banks. CBs want inflation? They need a higher gold price. CBs want to repair their balance sheets? They need a higher gold price. CBs want to reset the system with an immutable, neutral, and evenly distributed reserve asset? That's gold.
Jan Nieuwenhuijs

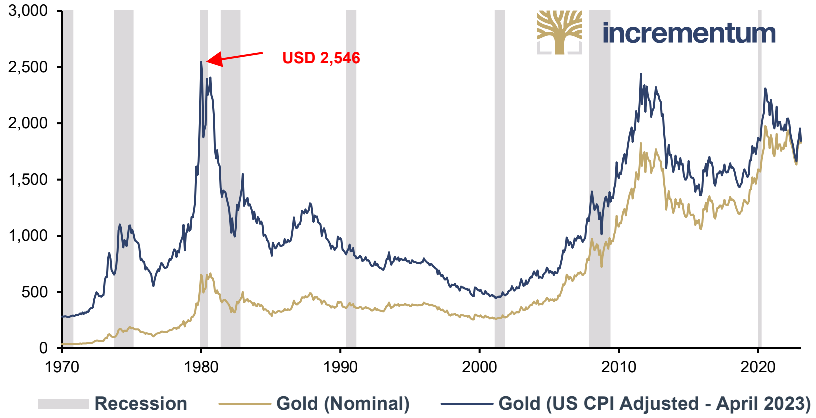
Is gold now already too expensive? We hear this question frequently, from customers, journalists and private investors. Given the current turbulent mixed situation, it is hard for us to imagine that we are at the end of a gold bull market. A comparison of various macro and market metrics at the time of the last two secular all-time highs in 1980 and 2011 with the current situation reinforces this view. The gold price definitely still has a lot of room to move up.

Comparison of various Macro- and Market Key Figures at Gold ATH in 1980, 2011 and Currently

	1980	2011	Currently
Gold Price in USD	835	1,900	2,018
Monetary Base in USD bn	157	2,637	5,571
M3 Supply in USD bn	1,483	9,526	20,818
US Federal Debt in USD bn	863	14,790	31,459
GDP per Capita	12,303	50,056	79,087
US Median House Price in USD	63,700	228,100	436,800
S&P 500	111	1,174	4,136
US Unemployment Rate in %	6.3	9.0	3.4
USD Index	86.1	75.2	102.3

Source: treasury.gov, Federal Reserve St. Louis, Reuters Eikon (as of 05/15/2023), Incrementum AG, Despite the significant nominal price increase in recent years, it should not be forgotten that in an inflation-adjusted view, the real all-time high of the gold price from the year 1980 of USD 2,546 has not been reached by far.

Gold (Nominal), and Gold (US CPI Adjusted - April 2023), in USD, 01/1971-04/2023

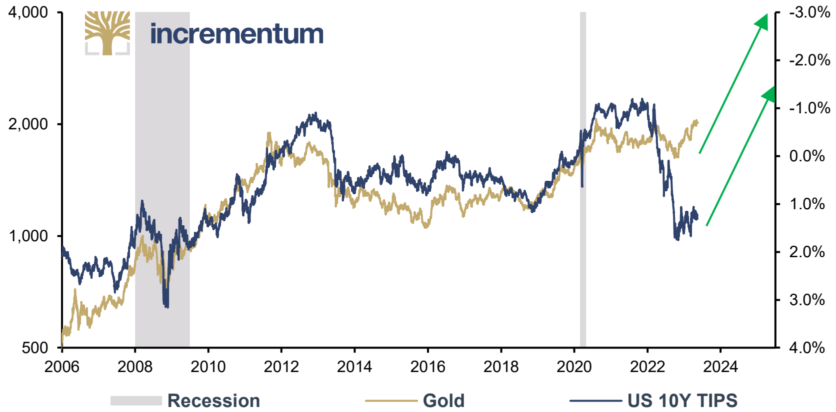


Source: Nick Laird, Reuters Eikon, Incrementum AG

Gold continues to be massively underrepresented in most individual and institutional portfolios.
Charles Gave

But in the medium term, we also consider significantly higher targets than the inflation-adjusted all-time high to be realistic. For a gold price of USD 3,000, for example, the real yield on 10-year US Treasuries would have to be minus 3%. With a 10-year nominal yield of +2%, this would correspond to a 10-year inflation expectation of 5%. We believe this scenario is quite plausible and may very well unfold during the upcoming wave of inflation.

Gold (lhs, log), and US 10Y TIPS (rhs, inverted), 01/2006-05/2023



Source: Reuters Eikon, Incrementum AG

We have highlighted different aspects relevant to the gold price development in this detailed position statement. **Based on the current situation, we firmly believe that gold is a multidimensional portfolio component with antifragile properties that will come into its own in the upcoming showdowns.**

In Gold We Trust Extra: The Gold/Oktoberfest Beer Ratio[31]

The mouth of perfectly happy man is filled with beer.
Egyptian idiom

Every time beer price increases are announced, it triggers a small earthquake. However, the unrest among the population is not quite as intense now as it was in 1844. At that time, the increase in the price of beer from 5 to 6½ Kreuzer led to serious unrest. However, the military, which had been called in to help, did not take action against the beer price rebels, but rather showed solidarity with them. King Ludwig I was then forced to withdraw the price increase.

2023 is not 1844, and Bavarian Prime Minister Markus Söder is not King Ludwig I. And so the population accepted the news of two beer price rises in recent months with relative calm. And of course, the Oktoberfest 2023 will not be spared from the price increases. At the beginning of the year, Wiesn boss Clemens Baumgärtner expressed his fear that the price of a Maß of beer could rise above 14 euros.

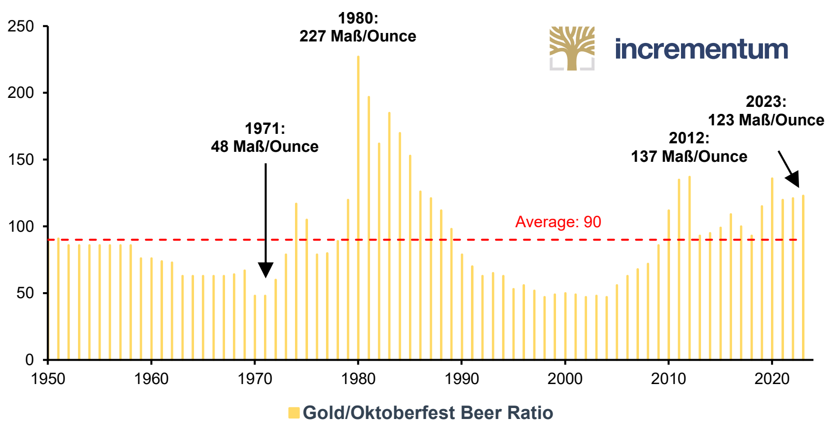
Mei Bier is net deppat!
Mundl Sackbauer

It is certain that this mark will fall. Last year, visitors to the Oktoberfest had to pay up to EUR 13.80 for one liter of Bavarian beer, brewed in adherence to the German Reinheitsgebot. So the only hope left in times of significantly elevated inflation is that the price of beer will not exceed the psychologically important mark of 15 euros. We therefore expect the Maßpreis to rise to EUR 14.90, which corresponds to an increase of 8.0%, which is rather moderate in times like these.

Cervisiam bibat! ("Let's have a beer!")
Hildegard of Bingen

Gold investors, however, can be relaxed about the recent price increases. And gold has not only maintained its beer purchasing power over the last 12 months, the gold/Oktoberfest beer ratio even increased slightly from 121 to 123 Maß Oktoberfestbier, despite the price increases in euros. So even in times of inflation, the beer lover with an affinity for gold is not left high and dry.

Gold/Oktoberfest Beer Ratio, 1950-2023



Source: Statista, Reuters Eikon, Incrementum AG

[31] We take a closer look at the gold/Oktoberfest beer ratio in an annual *In Gold We Trust* special in the fall, when the Theresienwiese is in full swing. For last year's *In Gold We Trust* special, *see* "O'zapft is! The gold/Oktoberfest beer ratio 2022," *In Gold We Trust* special, October 2022

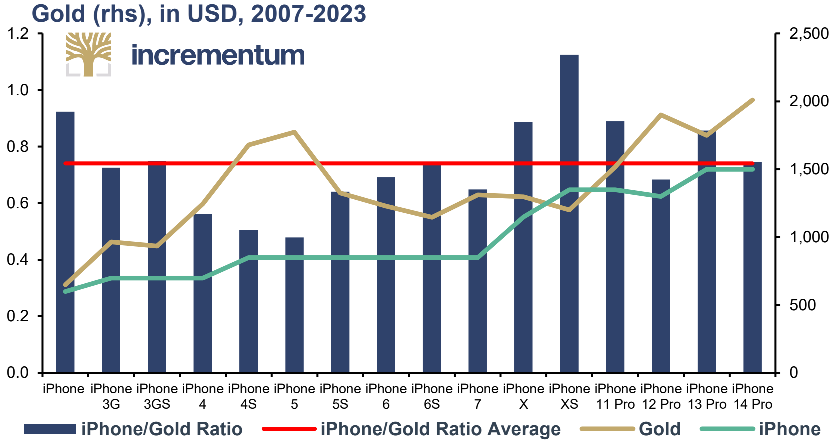
In Gold We Trust Extra: iPhone/Gold Ratio[32]

An iPod, a phone, an internet mobile communicator... these are NOT three separate devices! And we are calling it iPhone! Today Apple is going to reinvent the phone. And here it is.
Steve Jobs

The lament is sometimes a loud one: The new iPhone is once again more expensive than the predecessor model. Since 2007, the price of the most expensive iPhone model has risen sharply. At 1,499 USD, the iPhone 14 Pro cost at the day of its launch in September 2022 150% more than the very first iPhone, which went on sale at the end of June 2007 for 599 USD. **This corresponds to an *annual iPhone inflation rate* of 6.3% per year.**

Gold investors, on the other hand, have no reason to lament. In 2007, they had to pay 0.92 ounces of gold for the very first iPhone. Fifteen years later, only 0.75 ounces of gold are due for the iPhone 14 Pro. In the fall, when it was launched, they still had to pay 0.87 ounces of gold.

iPhone/Gold Ratio (Most Expensive Version) (lhs), and iPhone and Gold (rhs), in USD, 2007-2023



Source: venturebeat.com, Reuters Eikon, Incrementum AG

I named my phone 'Titanic' so when it syncs, it says 'The Titanic is syncing'.
Adam Sandler

On closer inspection, gold's increase in purchasing power is even more pronounced. This is because the iPhone 14 Pro only has its name in common with the original iPhone. The performance of the iPhone 14 is considerably different from that of the first iPhone generation. The performance improvements over the past 15 years have indeed been enormous.

	2007	2012	2017	2022	2022 vs. 2007
	iPhone	iPhone 5	iPhone X	iPhone 14 Pro	
Memory	128 MB	512 MB	4 GB	6 GB	48 x
Storage	16 GB	16 GB	512 GB	1 TB	64 x
Megapixel	2.0	8.0	12.0	48.0	24 x
Cameras	1	2	2	3	3 x
Battery	1,150mAh	1,440mAh	3,174mAh	3,279mAh	2.8 x
Resolution	480 x 320 (163 ppi)	640 x 1,136 (326 ppi)	2,436 x 1,125 (458 ppi)	2,256 x 1,179 (460 ppi)	2.8 x

Every iPhone buyer gets significantly more iPhone these days than in any previous year. **And those who went gold in the iPhone era have to shell out even less gold for the significantly better quality than they did for the very first iPhone.**

[32] We will look at the iPhone/gold ratio in more detail again this fall in an *In Gold We Trust* special when the new iPhone is released. For last year's premiere of the iPhone/Gold ratio, *see* "The iPhone/Gold Ratio 2022," *In Gold We Trust special*, September 2022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WELL CAPITALIZED
EXCLUSIVE ACCESS TO 145-YEARS OF EXPLORATION DATA
79 Au Gold 196.967
HOME OF THE 40M OUNCE HOMESTAKE GOLD MINE
+46,000 ACRE PROPERTY POSITION IN THE HOMESTAKE DISTRICT
DAKOTA GOLD
NYSE American: DC

The Showdown in Monetary Policy

In 2023, we will see whether a financial ecosystem sanitized by a decade of cheap money, and a deep-seated belief in the Fed put, is prepared for that moment when the US economy has gone into recession but the monetary cavalry is still some distance away.

Jamie Dannhauser

- **The longer we wait for the recession to arrive, the worse it could become. Many central banks are faced with the dilemma of price stability vs. economic stability.**
- **In fact, the Federal Reserve faces a trilemma in the face of the turmoil, as it must now also actively ensure financial market stability.**
- **The most-anticipated recession continues to be a long time coming, as the fiscal stimulus from Covid times lingers. The recession will inevitably become a political issue, in view of the upcoming US elections in 2024.**
- **Many reliable indicators – the yield curve, ISM, LEI, money supply development – point to an imminent recession.**
- **The Federal Reserve's pivot could catch many stock investors on the wrong foot, as such a turnaround has by no means always led to rising stock prices in the past.**
- **Our proprietary *Incrementum Recession Phase Model* confirms the excellent characteristics of gold as a recession hedge and provides information on the performance of different assets in the various phases of a recession.**

Showdown: Federal Reserve vs. US Economy

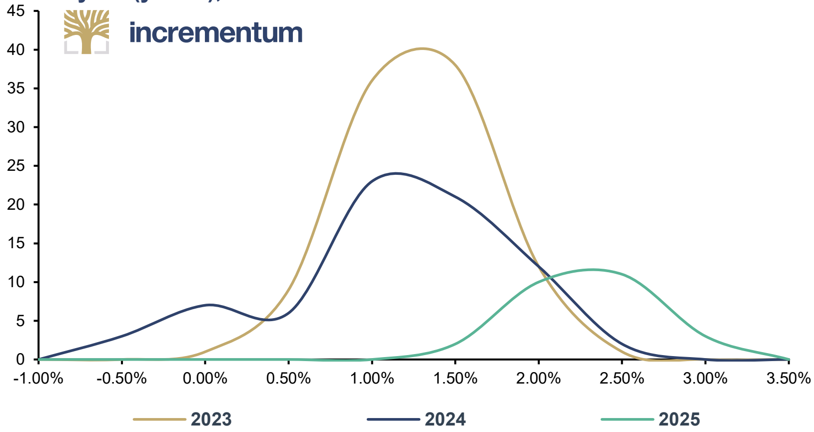
The herd instinct among forecasters makes sheep look like independent thinkers.
Edgar Fiedler

The showdown – a moment when everything is at stake. A confrontation that decides everything. This is how one could describe the situation in which the global economy currently finds itself. It is becoming clear that the economic boom caused by the reopening after the pandemic is gradually fading. Signs of recession are growing, warnings are getting louder, and uncertainty on the markets is rising.

2021 and 2022 saw a veritable euphoria of growth, especially in the developed economies. However, the record growth figures were almost exclusively due to the fact that measures enacted to prevent the spread of the coronavirus were initially weakened, then later partially and finally completely lifted. Now that these growth-driving extraordinary measures are fading, the question arises, what will happen now?

Even though we often read about the *most anticipated recession ever*, the analyst consensus actually speaks a different language. **The majority of analysts and market participants currently believe that there will only be a slowdown in growth, or at most a *soft landing*, i.e. a mild recession.**

US GDP Polls, Annual GDP Growth (x-axis), and Number of Analysts (y-axis), 04/2023



Source: Reuters Eikon, Incrementum AG

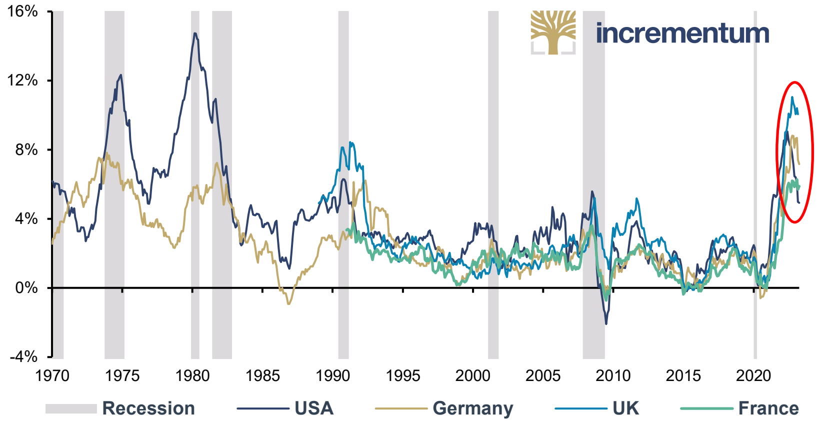
Any forecast of the future says more about the forecaster than it does about the future.
Warren Buffett

Based on April surveys, both the median and the average of analysts' estimates of annual US GDP growth for 2023 and 2024 lie between 0.8% and 1.1%. However, the forecasts for the coming quarters are likely to be significantly lower. Overall, only 4 out of 100 analyst firms believe the US economy will contract in 2023, compared with13 out of 93 for 2024. **None of the analysts surveyed expects a severe recession – despite extreme monetary tightening.**

This is where the central banks come into play as decisive actors. Especially since the Global Financial Crisis of 2007/08, central banks have taken on enormous responsibility – and so far, have not been able to live up to it. After all, acting responsibly also means facing up to reality, not trying to suppress it with ever new waves of liquidity.

Therefore, the repeated efforts of central banks, this time with active support from fiscal policy, to stimulate an even slightly weakening economy was bound to end up **in a strong wave of inflation, the likes of which we have not seen in large parts of this world for over 40 years.**

CPI, yoy, USA, Germany, UK, France, 01/1970-04/2023



Source: Reuters Eikon, Incrementum AG

So far, central banks have always lagged in setting the course. This is not surprising, especially if central bankers, as they tirelessly emphasize, want to make decisions based on data. After all, the data is always yesterday's data, never today's data, and certainly not tomorrow's data.

A Small Silver Lining on the Growth Horizon

Stagflation 2.0
In Gold We Trust Report 2022

Last year, on the cover of the *In Gold We Trust* report "Stagflation 2.0" we positioned a creeping *economic bear* along with an *inflation wolf* in the background. We are convinced that the bear is now dangerously close and that the year 2023 could be mauled by a recession.

To begin, however, we would like to present arguments *against* a recession in the US. Although our starting hypothesis is that the US will slide into recession somewhen in the second half of the year, there are, as always, several factors which justify a more optimistic assessment and which could, contrary to expectations, prevent a recession.

One argument against a recession, much less a hard landing, is the GDP deflator. A severe recession in times of high inflation is improbable because the GDP deflator tends to "gloss over" the growth figures and sometimes make them look better than they actually are. This is the case when the GDP deflator does not fully capture price changes or when inflation is underestimated.

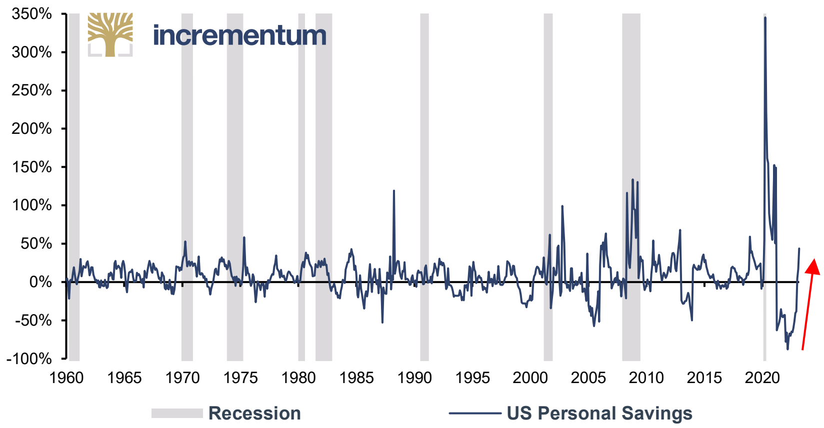
The fiscal recklessness of the last decade has been like watching a horror movie unfold.
Stanley Druckenmiller

The stimulating effect of high budget deficits is another factor supporting growth. Fiscal stimulus has so far counteracted the withdrawal of liquidity. One source of stimulus is the promotion of the expansion of renewable energies, another is the generous transfers to the private sector during the Covid-19 pandemic and subsequently to cushion the inflation and energy-cost crisis. The numerous US stimulus programs to alleviate the Covid-19-related economic slowdown alone amount to just over USD 5trn, or 25% of GDP. These transfers have enabled households to build up record levels of savings.

Don't save what is left after spending; spend what is left after saving.
Warren Buffett

Although these excess savings have been consistently reduced again since the withdrawal of the Covid-19 measures from initially USD 2.1bn to now still USD 0.5bn, they are still above average and are currently supporting consumption. This means that robust consumer demand from private households can be expected to continue in the coming quarters, even though the savings rate in the US is now rising again. **Some households already appear to be accumulating additional savings to have financial reserves in the event of recession-related layoffs.**

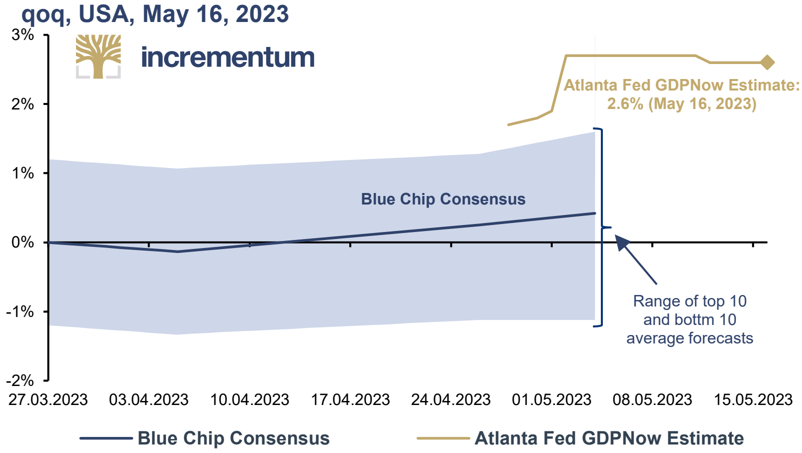
US Personal Savings, yoy, 01/1960-03/2023



Source: Federal Reserve St. Louis, Incrementum AG

In addition, the latest *GDP Now* estimates of the Federal Reserve Bank of Atlanta for the current Q2/2023 show solid real growth of 2.6%. However, for us, this is less an indicator that the US economy is on solid ground, but rather that the recession we are expecting will probably not materialize until next quarter or the quarter after.

Atlanta Fed GDPNow Estimate of Real GDP Growth for Q2 2023, qoq, USA, May 16, 2023



Source: Federal Reserve Atlanta, Blue Chip Economic Indicators, Blue Chip Financial Forecasts, Incrementum AG

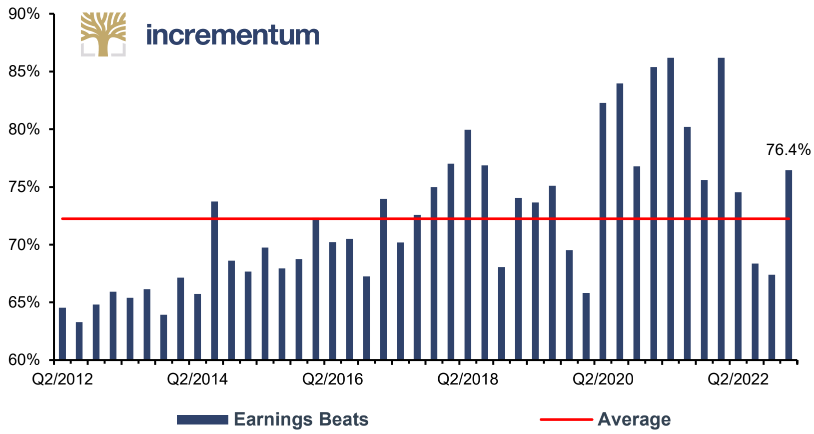
Amidst the backlight of rising stock prices, it remains a challenging task to fathom the shadow of recessionary clouds. Since the mid-October

2022 low, the S&P 500 has surged by approximately 15%, which, at first glance, appears to convey optimism. However, how are companies faring in this demanding economic environment?

Gold has no earnings, no dividend payments, and no conference calls. We can't call up management and talk about governance, because it [gold] is in the periodic table.
Jim Grant

In many cases, the market results have exceeded analysts' expectations, although these were not overly ambitious, either. So far, 450 of the S&P 500 companies have reported their results for Q1/2023. Of these, 344 companies exceeded expectations, 90 missed them, and 16 hit them. This equates to a percentage earnings beats score of 76.4%, well above the average since Q2/2012 of 72.2%.

Earnings Beats, as % of all S&P 500 Companies, Q2/2012-Q1/2023*



Source: S&P Global, Incrementum AG
+for Q1/2023 89.1% of all S&P 500 companies reported earnings as of 05/09/2023

The Harbingers of Recession

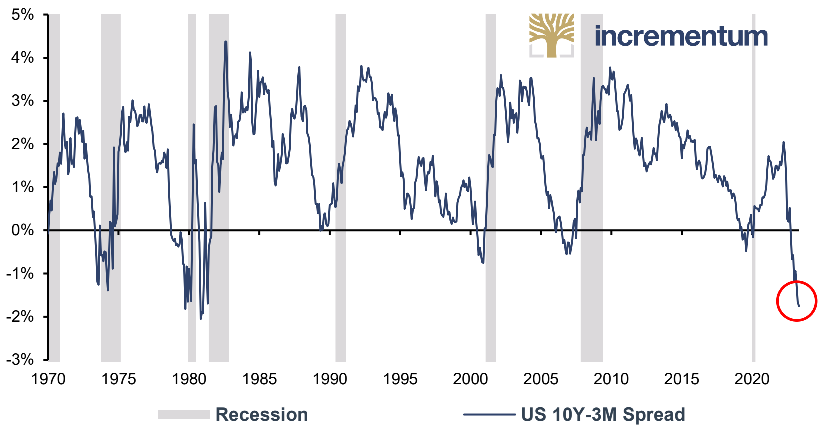
Clearly eclipsing these positive factors are myriad signs of economic weakness, which are thus the focus of the monetary policy showdown: Will the Federal Reserve sacrifice fighting inflation for growth, or sacrifice the economy for price stability?

Inversion in the bond market

Possibly the most robust indicator of an impending recession is when the Federal Reserve dismisses the inverting yield curve as a predictor of an impending recession.
Albert Edwards

The yield curve in the US has been strongly inverted for some time, meaning that yields on short-term bonds are higher than those on longer-term bonds. In the present context, interest rate inversions serve as an extremely reliable recession indicator. In many cases, however, the recession occurred only after the yield curve began to normalize again. **The inversion is currently as strong as it was last during the severe recessions in 1973–75 and the double-dip recession in the early 1980s.** As a result, the bond markets are clearly bucking the sentiment on the equity markets. Thus, we are also facing an equity market vs. bond markets showdown. Historically, bond markets have been better forecasters.

US 10Y-3M Spread, 01/1970-05/2023



Source: Reuters Eikon, Incrementum AG

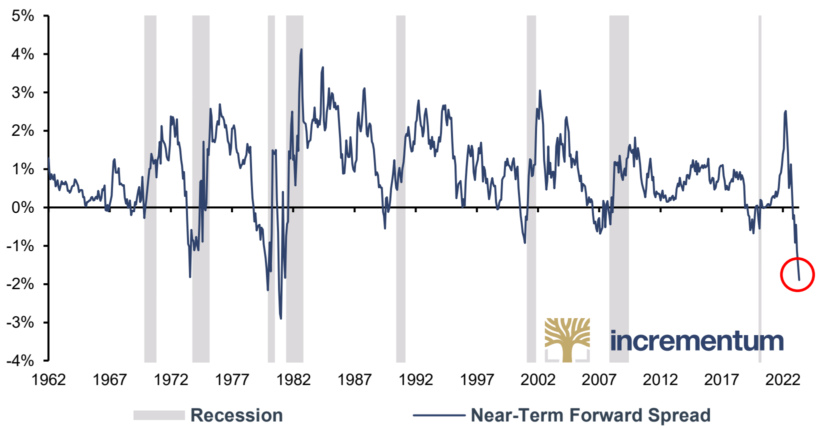
I would not interpret the currently very flat yield curve as indicating a significant economic slowdown to come.
Ben Bernanke, March 2006

Courtesy of Hedgeye

The spread between 10-year and 3-month bonds usually peaks just before the first rate cut by the Federal Reserve. **If one believes the implied fed funds rates, the Federal Reserve made its last rate hike in May**. So, the inversion may still further intensify. However, a strong inversion does not necessarily mean a severe recession, as there is no direct correlation between the strength of the inversion and the severity of the subsequent recession.

The Federal Reserve itself prefers the *near-term forward spread*, i.e., the difference between the expected 3-month interest rate in 18 months and the current yield on 3-month bonds, as an indicator. This has been inverted for seven months and fell to a new cycle low in May.

Near-Term Forward Spread, 01/1962-05/2023



Source: Diercks & Soques, neartermforwardspread.com, Incrementum AG

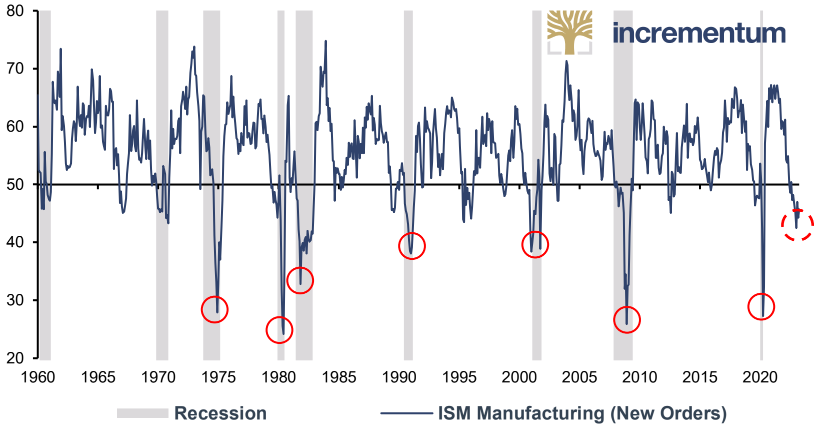
Central bankers choose when to hike - markets choose when they will ease.
Kevin Muir

However, the Federal Reserve seems to have negated this warning sign as well. **An inversion of this magnitude has so far always resulted in a recession within the following eight months**.

Real economic indicators signal downturn

What will it take for the Federal Reserve to shed its hawkish plumage? In July 2022, the ISM broke through the 50 mark for the first time in this cycle, to a value of 48.6. It currently stands at 45.7, which statistically indicates a recession on the one hand and the Federal Reserve loosening its monetary policy reins on the other. In the recent past, the Federal Reserve has always reacted to a drop in the ISM index below 50 by easing monetary policy.

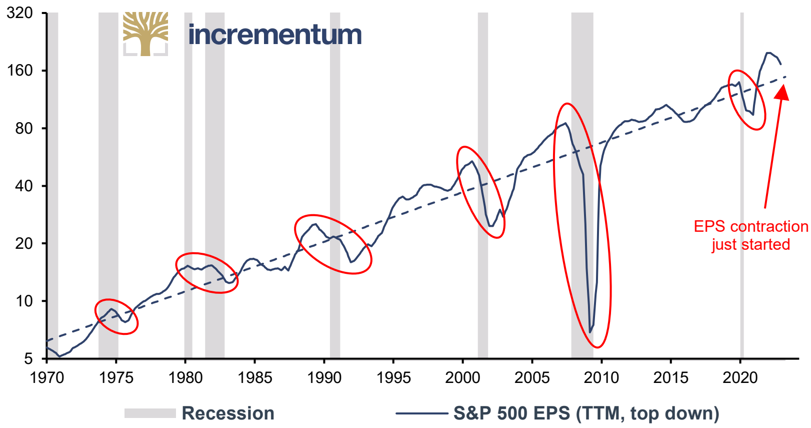
ISM Manufacturing (New Orders), 01/1960-04/2023



Source: Reuters Eikon, Incrementum AG

The fact that corporate earnings have weakened recently can be seen from the EPS development of the S&P 500 companies.

S&P 500 EPS (TTM, top down), Q1/1970-Q4/2022



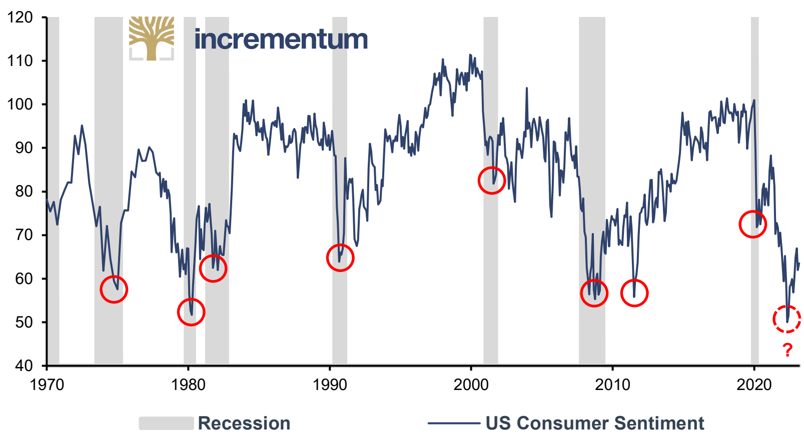
Source: Reuters Eikon, Incrementum AG

While we are still a long way from a collapse like that of the early 1990s or 2000s, the contraction is currently only in the starting blocks. We believe it is realistic that when the recession sets in, corporate profits will fall below the trend line drawn above. However, a profit contraction on a similarly dramatic scale as in the 2008/09 recession is not in line with our base scenario.

Trust comes on foot and flees on a horseback.
Dutch proverb

The recession picture looks even clearer in terms of US consumer confidence, which is surveyed by the University of Michigan. In June 2022, the index reached the lowest level in its almost 70-year history and was even significantly lower than at the beginning of the Covid pandemic. Since then, consumer confidence has recovered slightly; but at a value of 63.5, it remains at a historically low level that in the past could only be observed before or during a recession.

US Consumer Sentiment (University of Michigan), 01/1970-04/2023



Source: Reuters Eikon, Incrementum AG

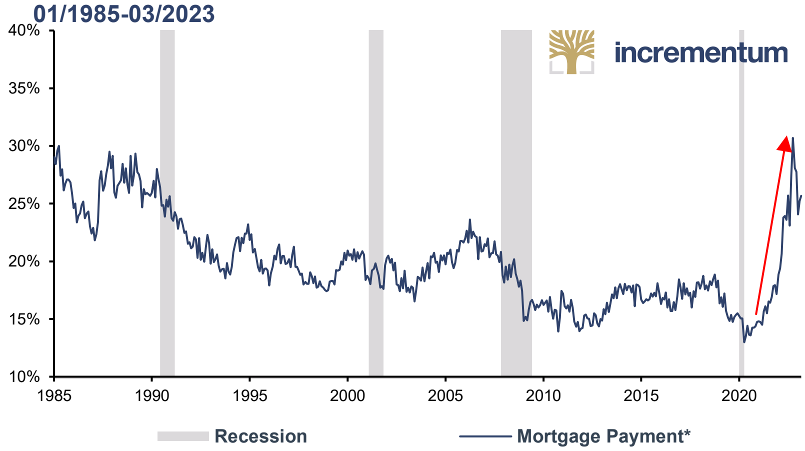
The real estate sector is reeling

We have a lot of troubled office buildings, a lot of troubled shopping centers, a lot of troubled other properties. There's a lot of agony out there.
Charlie Munger

The real estate market, which is vitally important for the US economy, is already undergoing a striking correction. Prices are falling, demand is declining, and new orders are collapsing. The main reasons for this are the significant increase in financing costs and the dystopian rise in prices for residential real estate in relation to household income in recent years.

This abrupt development is shown in the following chart of mortgage rates in relation to US median household income. This ratio reached a high of 30.7% in October 2022 and has only retreated slightly since then. The rapid increase illustrates how much the financing problem has intensified for potential US home buyers.

Mortgage Payment*, in % of US Median Household Income, 01/1985-03/2023



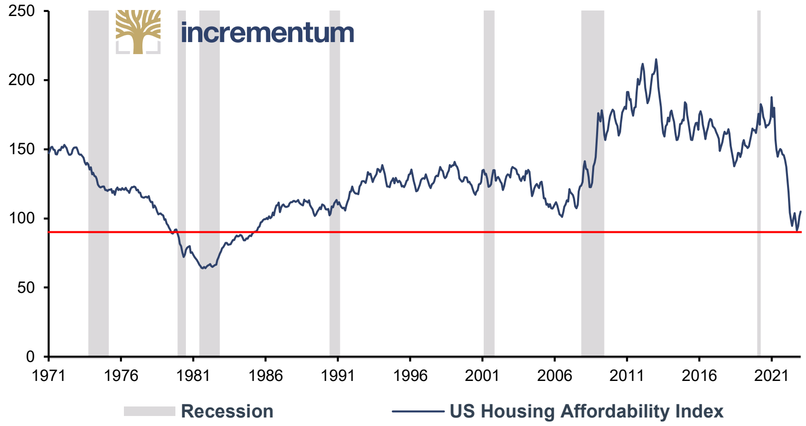
Source: Reuters Eikon, Incrementum AG
*Inputs: Interest Rate = 30-Year Fixed Rate Mortgage, Equity = 30%, Home Price = US New Home Sales

This may be the worst time in my living history for the home buyer – it just doesn't make sense.
Mark Zandi, Chief Economist Moody's

The observation that rising housing prices have now become a major problem is supported by the US Housing Affordability Index. This index measures whether the average family has a high enough income to obtain a mortgage loan for a typical home. In October 2022, the index reached a low of 91.3. In the last 50 years, a lower level had only been seen in the late 1970s and early

1980s. **Aside from those periods, it has never been more difficult for the average family in the US to purchase a property than it is today.**

US Housing Affordability Index, 01/1970-01/2023

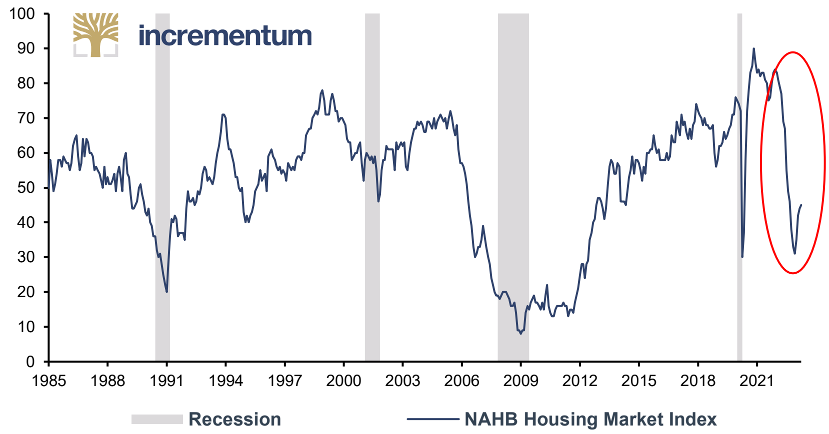


Source: NAR, ycharts.com, Reuters Eikon, Incrementum AG

There's nothing more interest rate sensitive than real estate.
Thomas Vesely

The significant decline in demand for real estate as a result of the rapid rise in mortgage rates over a short period of time is underpinned by the NAHB Real Estate Market Index. The index measures the sentiment of builders regarding current and future market conditions, with a value above 50 signaling positive market sentiment. Within one year, the index fell from 84 to 31 from December 2021 to December 2022**. Such a rapid drop was not even seen during the real estate crash in the 2000s.**

NAHB Housing Market Index, 01/2000-04/2023



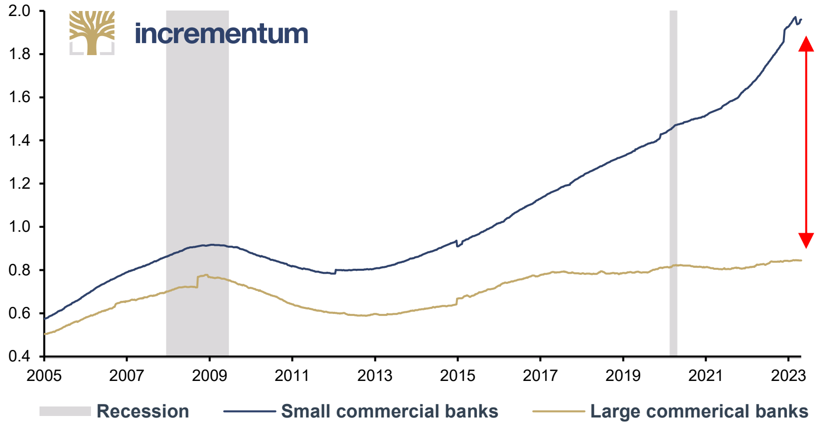
Source: Reuters Eikon, Incrementum AG

If the Fed's efforts in recent years were primarily focused on creating a wealth effect to stimulate the economy, they should be increasingly concerned now to see these growing signs of a reverse wealth effect.
Jesse Felder

The housing market is so significant for the assessment of recessionary trends as no sector of the US economy is more important than residential real estate. According to Federal Reserve analysis, the real estate industry accounted for about 17% of GDP in 2021, and mortgages account for the largest share of private sector wealth and income. According to the reverse wealth effect, the close link between the real estate market and household wealth means that falling real estate prices and rising mortgages can lead to a drop in purchasing power and thus weaken private sector consumption.

Let's now look specifically at the commercial real estate market. This has recently received increased attention as many US banks have come under pressure in the wake of corrected market valuations in the commercial segment. In particular smaller US banks, known for their heightened vulnerability to economic pressures, bear an inequitable burden, as they hold an outsized portion of approximately 70% in commercial real estate (CRE) loans.

Commercial Real Estate Loans, by Size of Lender, in USD trn, 01/2005-05/2023



Source: Federal Reserve St. Louis, Allianz Research, Incrementum AG

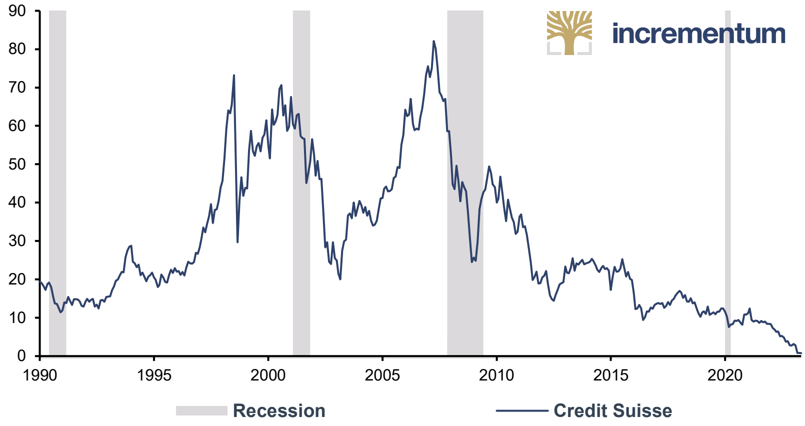
As economic activity continues to cool, banks now face a double whammy: First, the risk of default on CRE loans is rising; second, CRE valuations must be sharply adjusted, while the cost of funding is rising and squeezing net interest margins.

How stable is the financial market's house of cards?

Money is the MacMansion in Sarasota that starts falling apart after 10 years.
Frank Underwood, House of Cards

The financial market, which in recent years has been characterized by a high degree of stability – it has almost always been on the up, thanks to the liquidity support of the central banks – is suddenly shaken. In this showdown, it's not only supposedly scrappy opponents like Silicon Valley Bank – before its bankruptcy the 16th largest US bank in terms of deposits – or First Republic Bank that are being hit, but also heavyweights like Credit Suisse. For the latter, in Q4/2022, net outflows amounted to CHF 110.5bn, and in Q1/2023 another CHF 61.2bn flowed out. Then, on March 16, 2023, when it became known that Credit Suisse intended to draw on an extraordinary liquidity grant of up to CHF 50bn from the SNB, the bank's rating was abruptly downgraded from A to BBB and the bank was taken over by UBS for what could almost be classified as a symbolic amount of CHF 3bn.

Credit Suisse, Stock Price, in CHF, 01/1990-05/2023



Source: Reuters Eikon, Incrementum AG

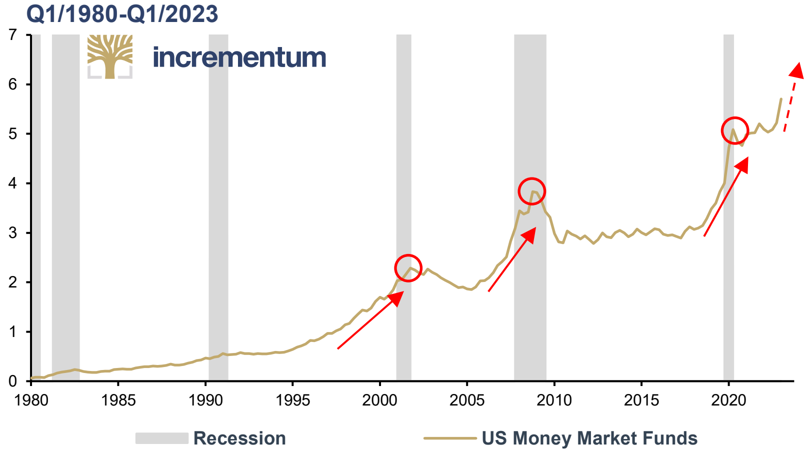
Would I say there will never, ever be another financial crisis? … Probably that would be going too far. But I do think we're much safer, and I hope that it will not be in our lifetimes, and I don't believe it will be.
Janet Yellen, 2017

…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

Central banks are responding to these distortions in the financial sector by mouthing the words *financial market stability* more often than *price stability*, and this with inflation rates beyond the 5% mark. Thus, the pivot long longed for by many market participants seems to be within reach. Currently, the market expects the first interest rate cut before the end of the year. However, **a pivot does not equate to a favorable performance – especially on the stock market – as we will discuss later in the chapter. This much can be revealed: The recession bear has already found its next victim.**

As a result of the recent turmoil in the banking sector, increasingly high inflows into money market funds were registered. In March 2023 alone, more than USD 340bn flowed into money market funds. This is the highest figure since April 2020, when uncertainty on the financial markets caused by the outbreak of the Covid pandemic was at its peak.

US Money Market Funds, Total Financial Assets, in USD trn, Q1/1980-Q1/2023



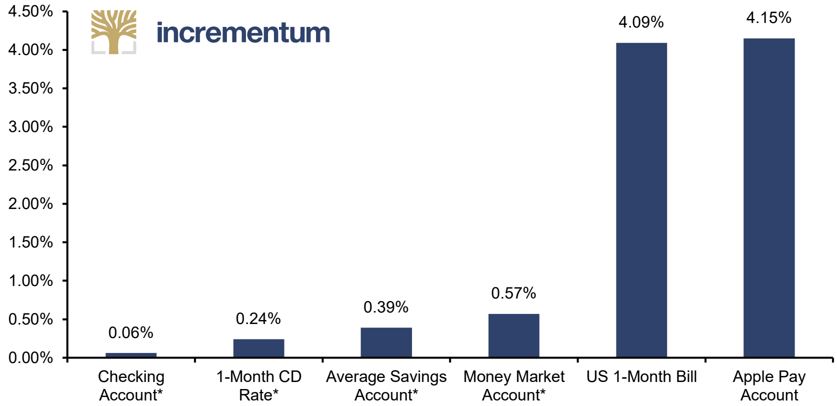
Source: Federal Reserve St. Louis, SEC, Incrementum AG

But why is this and what does the level of inflows mean for investors? Money market funds offer a safe and stable investment option. Especially in times of uncertainty and volatility in the financial markets, they are seen as a safe haven. Considering the recent banking crisis, many bank customers, fearful that their deposits are not safe, are withdrawing their money and looking for alternatives.

Markets are unlikely to tolerate much tightening of liquidity or interest rates. That's why we should expect inflation volatility.
Henry Maxey

The latest inflows can therefore be interpreted on the one hand as an indication of rising instability in the financial sector. On the other hand, the interest rates offered by conventional banks are currently significantly lower than those offered by money market funds, which mostly invest in liquid, short-term government bonds. **In addition, competition has intensified due to new market entrants such as Apple, which recently stirred up the market with an effective annual interest rate of 4.15% for all Apple Pay users in the US.**

Comparison of US Interest Rates, APY, 04/2023



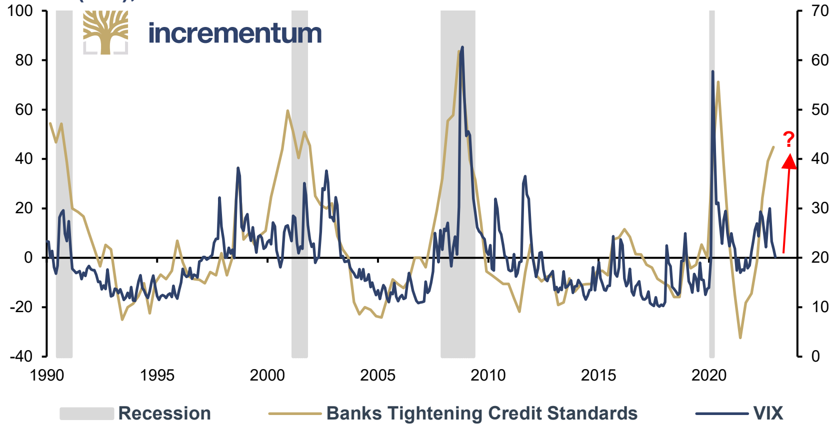
Source: FDIC, Federal Reserve St. Louis, Reuters Eikon, Incrementum AG
*Average values

In our view, equity downside will be driven by worsening economic conditions, a function of: aggressive monetary policy; potential capital/liquidity issues catalyzed by the bank crisis; and a consumer that is increasingly reliant upon credit to sustain spending.
Chris Harvey

The rapid increase in investments in money market funds can have negative effects on the sector. Particularly before the financial crisis in 2008, and in 2020, investments in money market funds increased significantly as investors sought safe and stable investment options. However, this led to significantly higher demand for short-term bonds and money market instruments, which in turn led to an overvaluation of these instruments. Furthermore, it fueled stress in the banking sector, as banks lost further liquidity as a result and profits shrank. One of the consequences is tighter credit conditions.

The next chart shows that tighter credit conditions for companies are mostly accompanied by increased volatility in financial markets. This phenomenon was particularly well observed in 2008/09 and 2020. Since June 2021, the trend has been toward tighter credit.

Net Percentage of Banks Tightening Credit Standards (lhs), and VIX (rhs), 01/1990-03/2023

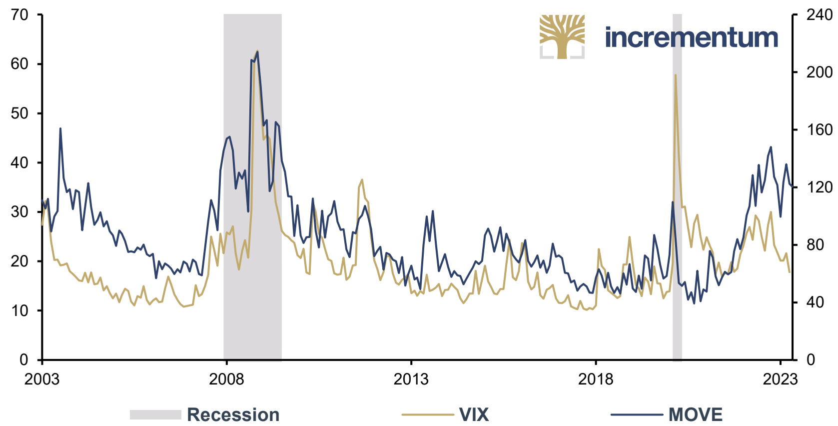


Source: Federal Reserve St. Louis, Incrementum AG

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

An analysis of the volatility indices is also revealing. In Q1/2008, too, the VIX volatility index, which measures implied volatility for the S&P 500, remained quiet, at levels similar to today's. However, the credit situation continued to worsen in subsequent quarters until the failure of Lehman Brothers in September 2008 led to a sharp rise in volatility. While volatility on the stock market is still low now, the MOVE Index, which measures implied volatility on the US bond market, is at levels last measured in 2008/09.

VIX (lhs), and MOVE (rhs), 01/2003-04/2023



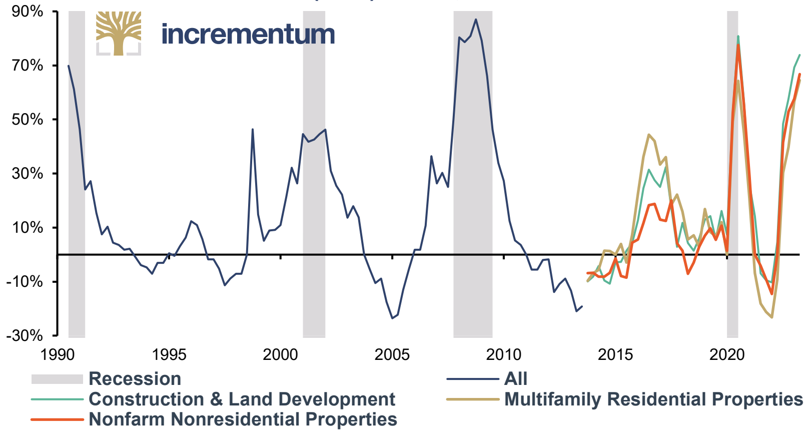
Source: Reuters Eikon, Incrementum AG

Our economy isn't going to recover until the housing market finds its footing.
Mark Zandi

The looming credit crunch is also being accompanied by increasing distress in the commercial real estate (CRE) sector, which will exacerbate and prolong the slowdown in the US economy and financial sector. A credit crunch seems inevitable as banks are forced to strengthen their balance sheets and thus may face an increasing number of recalled loans and a significant curtailment of lending.

Because smaller banks are particularly vulnerable to losses on their commercial real estate portfolios, more conservative credit conditions would limit, and thus strain, credit availability to the broader economy. If increasing pressures on the commercial real estate market affect bank solvency, this could further constrain lending and prevent the Federal Reserve from maintaining a tight monetary policy.

Net Percentage of Banks Tightening Credit Standards for Commercial Real Estate (CRE) Loans, Q1/1990-Q1/2023



Source: Federal Reserve St. Louis, Longview Economics, Macrobond, Incrementum AG

Courtesy of Hedgeye

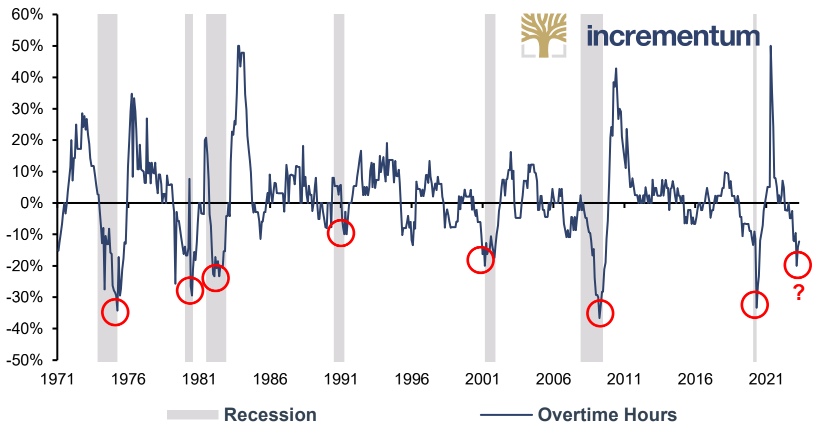
Provided that the restrictive credit conditions on the financial market remain in place, we expect economic uncertainty and tighter financing conditions to lead to a gradual increase in pressure on the commercial real estate market in the coming months. **Losses in this area could have a negative impact on the entire banking sector and ultimately on the economy.**

Labor market shows first weaknesses

Labor was the first price, the original purchase – money that was paid for all things. It was not by gold or by silver, but by labor, that all wealth of the world was originally purchased.
Adam Smith

For a long time, the labor market has been surprisingly robust, but the first cracks are now visible. For example, the number of overtime hours worked has declined sharply year-on-year, which has been a reliable recession indicator in the past. In times of restrictive monetary policy and economic slowdown, companies try to cut costs by reducing staff or cutting working hours. Weakening orders also favors this managerial behavior. A temporary low of -18% in overtime hours formed in February 2023. Lower values were last observed only during the Covid-19 pandemic and during the 2008/09 recession following the Global Financial Crisis.

Overtime Hours, US Manufacturing Sector, yoy, 01/1970-04/2023

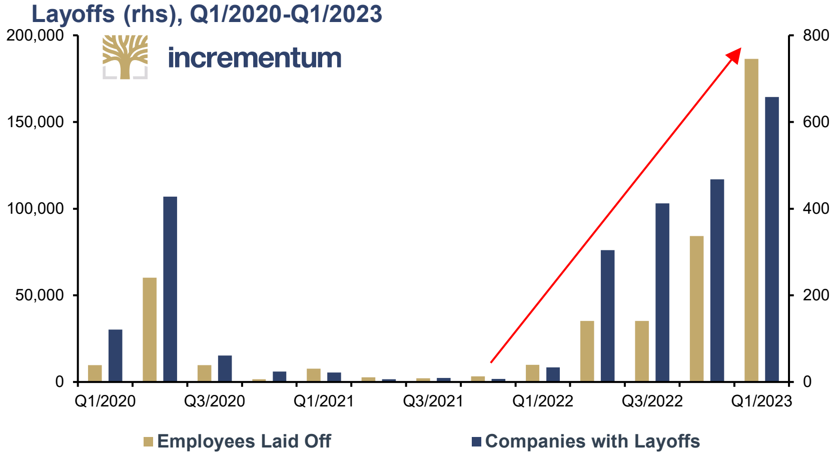


Source: Reuters Eikon, Incrementum AG

Every economy is based on the credit system, that is, on the erroneous assumption that the other person will pay back money that has been pumped.
Kurt Tucholsky

The gloom can also be seen in the fact that more and more sectors are reporting layoffs. This phenomenon can be observed particularly well in the interest-sensitive tech sector, where there are many companies with long duration, i.e., a high proportion of long-term investments and low liquidity. Whether it's Big Tech à la Facebook, Google, Amazon, or less-well-capitalized and lesser-known tech companies, one layoff announcement follows hard on the heels of the next. In difficult economic times, companies in the technology sector tend to lay off more workers, due to their very high labor costs, to stabilize their financial position and service their liabilities.

Tech Layoffs, Employees Laid Off (lhs), and Companies with Layoffs (rhs), Q1/2020-Q1/2023



Source: layoffs.fyi, Incrementum AG

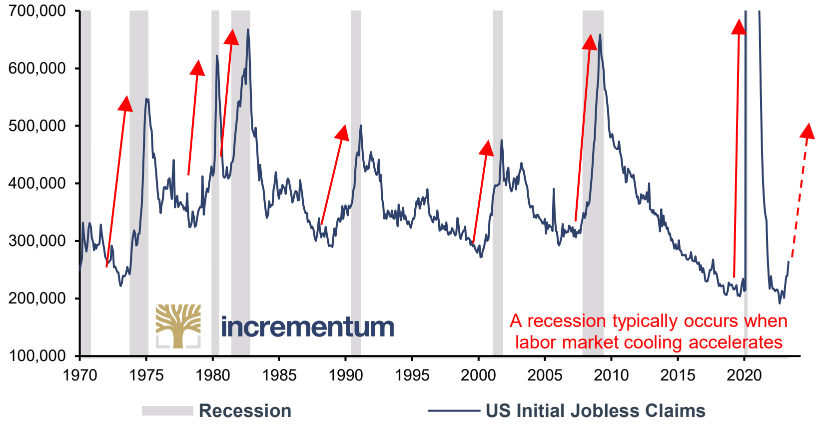
The statistics show that layoffs are steadily gaining momentum: In the first few months of this year, 186,328 jobs had already been cut by the beginning of May, more than the 164,576 in 2022. And "tech" these days also means transportation, healthcare, finance, real estate, infrastructure, and leisure and travel sectors, not just software and hardware companies. **Above all, though, tech means well-paid specialists.**

In stark contrast to previous recessions, white collar workers, of whom there are typically fewer in a company than blue collar workers, are currently bearing the brunt of job cuts. As a result, the impact on the unemployment rate and other labor-market statistics has so far been manageable. Only when blue-collar workers are also hit by layoffs will there be marked changes in the labor market.

The unemployment rate is a dumb statistic, but you knew that. Want to track economic growth? Pay attention to the labor force participation rate. It is inversely correlated to the Xbox participation rate and the yoga participation rate.
Jared Dillian

In September 2022, US initial jobless claims, commonly used as a leading indicator of the labor market, hit a new low since surveys began. Since then, the number of initial claims has jumped by nearly 25%, coinciding with the recent wave of layoffs in the tech sector. Historically, the low point in initial claims was reached before a recession. **A recession typically occurs when the labor market slowdown accelerates.** A sustained continuation of this trend could soon spell the end of record lows in the US unemployment rate and signal the onset of a recession.

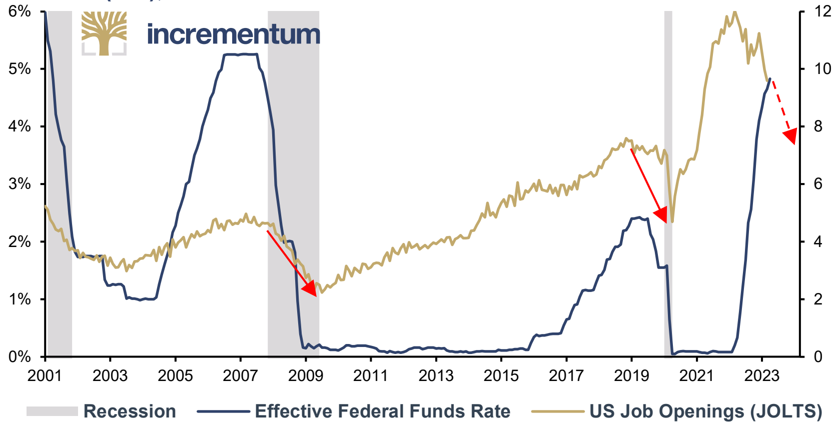
US Initial Jobless Claims, 01/1970-05/2023



Source: Reuters Eikon, Incrementum AG

In both 2008 and 2019, the Federal Reserve made its first rate cuts a few months after US job openings had formed a high. The high in the current cycle was marked back in March 2022. So, this time, the Federal Reserve's delay appears to be even more severe, as the first rate cut is long overdue based on macroeconomic trends, except for the significantly elevated inflation rate.

Effective Federal Funds Rate (lhs), and US Job Openings (JOLTS), in mn (rhs), 01/2001-04/2023



Source: BofA Global Investment Strategy, Reuters Eikon, Incrementum AG

Strategic Portfolio Adjustments

Be prepared for the pivot

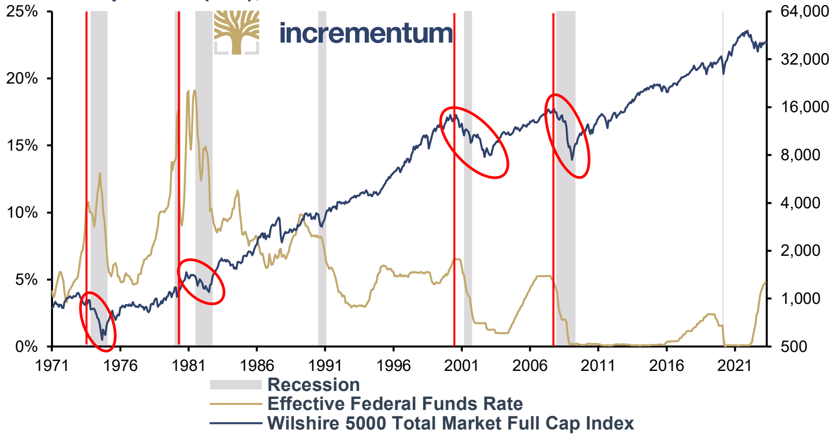
Because we assume that the US economy, in particular, will soon slide into a recession (but not alone), the question for investors becomes, what impact could a recession have on their portfolio? After all, this is unfamiliar territory for many investors, as the US economy has slid into recession only four times in the past 40 years, with only the 2008/2009 recession lasting longer than a year, at 18 months.

In principle, the influence of interest rate developments on the stock market is well known. Increasing interest rates result in higher borrowing costs, which can dampen both investment and consumption. Consequently, companies may experience a decline in profits, leading investors to adopt a more pessimistic outlook. In the case of falling interest rates, this chain of events should logically run in the opposite direction.

Interest rates are the heart, soul and life of the free enterprise system.
Michael Gayed

However, central banks tend to lower interest rates only when the economy is weakening or has long since weakened. In such a situation, investors may become nervous and sell their stock holdings, which can lead to a decline in stock prices. **Away from the model world, falling interest rates are not a positive indicator for the stock markets.** Perhaps it is precisely this simple and too-often-observed cause and effect principle that explains why falling interest rates trigger feelings of happiness, rather than concern, among market participants.

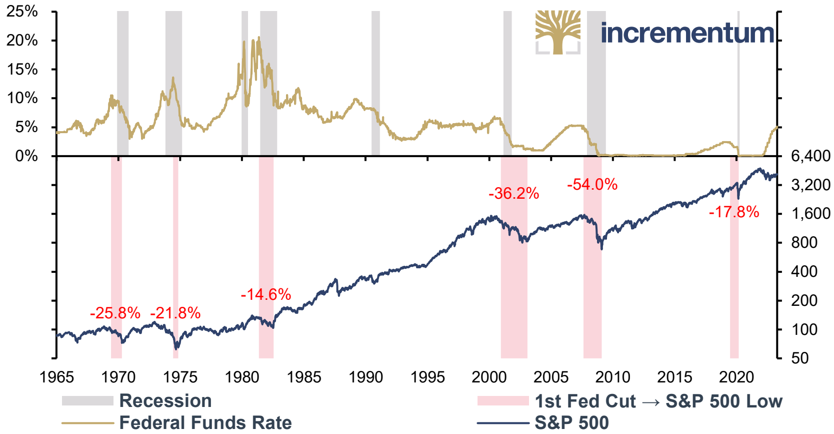
Effective Federal Funds Rate (lhs), and Wilshire 5000 Total Market Full Cap Index (rhs), 01/1971-05/2023



Source: Hussman Strategic Advisors, Reuters Eikon, Incrementum AG

As is so often the case, a look at the past reveals more than a glance at the textbooks, because in most cases this positive ceteris paribus effect of falling interest rates was not present in reality. **Since 1960, the S&P 500 has lost an average of 28.4% in all major interest rate reduction cycles.** At the current level of around 4,100 points as of May 12, this would indicate a decline to just below 3,000 points.

Federal Funds Rate (lhs), and S&P 500 (rhs, log), 01/1965-05/2023



Source: Reuters Eikon, Incrementum AG

The following table supports this finding. It shows the returns of the S&P 500 three and six months after the last interest rate hike by the Federal Reserve, as well as the federal funds rate at the time of the rate hike. A distinction is made between inflationary and disinflationary periods.

S&P 500 Returns after Last Fed Rate Hike

Date of last Fed rate hike	Fed funds rate	3 months	6 months
05/01/1974	13.00%	-14.0%	-19.9%
03/03/1980	20.00%	-1.5%	10.0%
05/08/1981	20.00%	0.1%	-6.8%
01/04/1982	15.00%	-6.5%	-12.6%
08/21/1984	11.75%	-2.2%	8.0%
Average return – inflationary period		**-4.8%**	**-4.3%**
02/24/1989	9.75%	12.0%	22.1%
02/01/1995	6.00%	10.6%	18.8%
05/16/2000	6.50%	1.3%	-5.2%
06/29/2006	5.25%	5.2%	11.4%
12/19/2018	2.375%	12.7%	17.8%
Average return – disinflationary period		**8.4%**	**13.0%**

Source: BofA Global Investment Strategy, Reuters Eikon, Incrementum AG

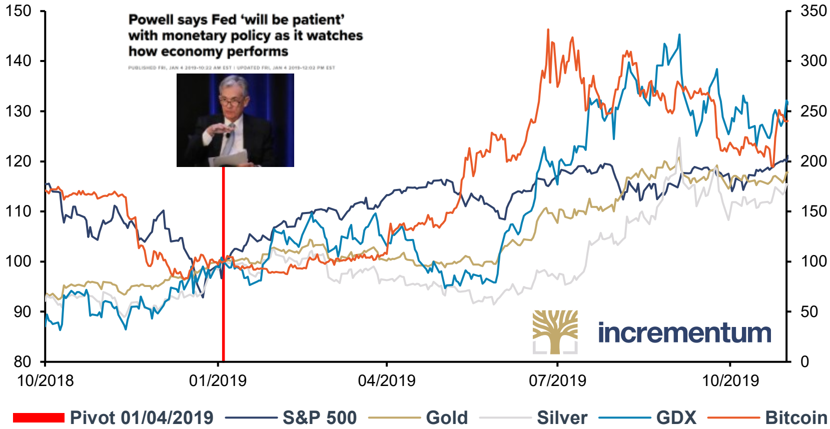
During the inflationary period, S&P 500 returns were negative in the three and six months following the last rate hike, averaging -4.8% (3 months) and -4.3% (6 months). During this period, the Federal Reserve was struggling with high inflation, so a similar balancing act between price value stability and recession avoidance had to be performed as is currently the case.

In the disinflationary period, S&P 500 returns were positive in the three and six months following the last rate hike, with a single exception, averaging 8.4% (3 months) and 13.0% (6 months). During this period, inflation was lower and the Federal Reserve's rate hikes were merely preventive in nature to avoid overheating the economy.

Courtesy of Hedgeye

This suggests that the development of inflation can fundamentally influence the dynamics of the pivot. With inflation rates currently remaining significantly elevated, the pivot could turn out to be a tempting apple for equity investors, one that appears flawless and juicy on the outside but is actually rotten to the core and inedible. **After the last pivot – when inflation was not yet an issue – almost all asset values rose significantly, as the following chart shows.**

Various Assets (lhs), and Bticoin (rhs), 100 = 01/04/2019, 10/2018-12/2019



Source: Reuters Eikon, Incrementum AG

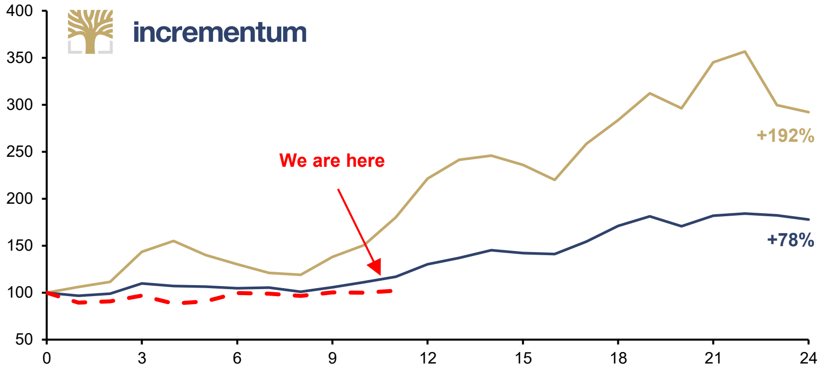
Be prepared for the recession

He will win who, prepared himself, waits to take the enemy unprepared.
Sun Tzu

What can we expect from gold in this environment? Gold's long history as an independent and stable store of wealth makes it a predestined recession hedge. Recessions and economic crises, in the view of the Austrian School of Economics, are inevitable events that occur due to business cycles or other external political as well as economic factors. And just as recessions are part of the business cycle, gold belongs – at least from our point of view – in every investor's portfolio.

The following chart shows the development of the gold/S&P 500 ratio after an inversion of the 10Y–1Y yield curve. On average, the ratio increased by 78% 24 months after the first inversion in an economic cycle, indicating a sharp outperformance of gold relative to equities.

Gold/S&P 500 Ratio, Performance after UST 10Y-1Y Inversions*, 01/1971-05/2023



Source: Tavi Costa, Crescat Capital LLC, Reuters Eikon, Incrementum AG
*excl. inversion 2019 due to low intensity and duration

In the stagflationary period 1973/74, the outperformance was even more pronounced. Since the inversion in June 2022, the ratio has largely remained at its initial level. Considering the historical observations, there is significant upside potential, particularly given the current macroeconomic conditions which bear strong similarities to those of the 1970s.[33]

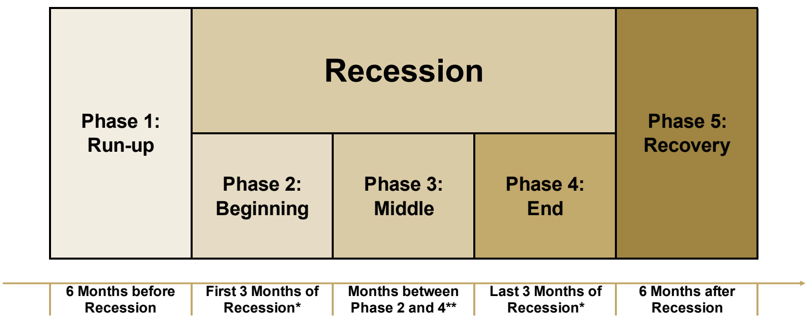
The *Incrementum Recession Phase Model*

Research creates new knowledge.
Neil Armstrong

The *Incrementum Recession Phase Model* (IRPM) examines the performance of different asset classes during recessions. Unlike many other analyses that only look at the average performance of asset classes during the entire recession period, **our *Incrementum Recession Phase Model* aims to help investors better adapt their investment strategies to the different phases of a recession.**

The model divides a recession into five distinct phases, each with different characteristics. A detailed analysis of asset performance in each of these phases allows us to gain a better understanding of which asset classes perform best in which recession phase.

Incrementum Recession Phase Model



Source: Incrementum AG

*For short recession periods less than 3 months
** For recession periods with 6 or less months no Phase 3 is identified

33 "Stagflation 2.0," *In Gold We* Trust *Report* 2022, p. 110

1. The **run-up phase** (phase 1) of a recession is characterized by burgeoning volatility on the financial markets. In this phase, the market increasingly starts to price in an impending recession.
2. In phase 2, the so-called **initial phase,** there is a transition between increased uncertainty and the peak of the economic slowdown. In this phase, the slowdown in economic momentum can also be documented for the first time with negative macroeconomic data.
3. In the **middle phase** (phase 3), the negative economic data manifest themselves. It also marks the low and turning point of the recession.
4. In phase 4, the **final phase**, a stabilization of the economy gradually occurs, resulting in a return of optimism on the markets.
5. In the fifth and final phase of the recession model, the **recovery phase**, the economy returns to positive growth figures.

In the case of a short recession, such as in 2020, there are phases that last less than 3 months, so phase 3 is irrelevant for recession periods of 6 months or less. In our recession phase model, we rely on the NBER definition[34] because it is the most common recession definition. Moreover, this definition is also followed by the Federal Reserve.

Dear @federalreserve, we all know that your taper/rate hikes will trigger a recession and market crash. Can we just fast forward to NIRP and even more QE that always follow?
Tyler Durden

However, we are aware that a recession according to the NBER definition is always announced with a lag of several months. Similar problems arise with alternative definitions, such as the technical definition of a recession[35] , where one has to wait for the publication of the final GDP quarterly figures. It is therefore of great importance to identify a recession at an early stage in order to position oneself as an investor in the best possible way. **Dividing a recession into distinct phases can help minimize the risk of losses and maximize returns by helping investors develop a balanced portfolio strategy that aligns with the different phases of a recession.**

Evaluation of the *Incrementum Recession Phase Model*

In this section, we will analyze the performance of the S&P 500 as a proxy for stocks and gold, and the BCOM Index, which serves as a proxy for commodities. In Chapter 15, we have also calculated the performances of silver.

The following table shows the performance of the S&P 500 during the various recession phases.

[34] The NBER's definition emphasizes that a recession involves a significant decline in economic activity that extends across the economy and lasts for more than a few months.
[35] A technical recession occurs when an economy records two consecutive quarters of negative economic growth.

S&P 500 Performance in the *Incrementum Recession Phase Model*

Date	Duration (months)	Recession	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
01/1970-11/1970	11	-5.3%	-5.8%	-2.6%	-9.0%	7.0%	14.3%
12/1973-03/1975	16	-13.1%	-8.6%	0.3%	-28.7%	21.6%	0.6%
02/1980-07/1980	6	6.6%	10.0%	-6.9%	n/a	14.5%	6.5%
06/1981-11/1982	18	4.5%	-5.6%	-7.4%	-2.7%	15.9%	17.2%
08/1990-03/1991	8	5.4%	8.2%	-14.6%	8.6%	13.6%	3.4%
04/2001-11/2001	8	-1.8%	-19.2%	5.5%	-7.4%	0.5%	-6.3%
01/2008-06/2009	18	-37.4%	-2.3%	-9.9%	-39.7%	15.2%	21.3%
03/2020-04/2020	2	-1.4%	0.9%	-12.5%	n/a	12.7%	12.3%
Average	**1.9**	**-5.3%**	**-2.8%**	**-6.0%**	**-13.2%**	**12.6%**	**8.6%**
Median	**9.5**	**-1.6%**	**-4.0%**	**-7.1%**	**-8.2%**	**14.0%**	**9.4%**

Source: Reuters Eikon, Incrementum AG

A view of the eight recessions since 1970 shows that equities lost an average of 5.3% in value. However, it should be noted that the Global Financial Crisis, an outlier, strongly distorts the average value downward. In comparison, the median value shows a negative performance of just -1.6%.

Knowing the right time is half the battle.
Maurice Couve de Murville

Interestingly, however, there were **major differences within the recession phases in terms of the impact on equities**. Particularly in the third phase, the peak of the recession, equities were hit the hardest. However, once the last three months of the recession (phase 4) were reached, equities recovered very well in all eight cases and continued this trend in the first months after the recession. **Based on our Recession Phase Model, it is therefore recommended to reduce equity allocation early until the peak of the recession is reached to then benefit from the subsequent recovery rally.** Let's now look at the performance data for gold under the Recession Phase Model:

Gold Performance in the *Incrementum Recession Phase Model*

Date	Duration (months)	Recession	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
01/1970-11/1970	11	6.6%	-14.5%	0.1%	1.7%	4.7%	8.9%
12/1973-03/1975	16	73.8%	-12.0%	60.8%	14.7%	-5.8%	-19.7%
02/1980-07/1980	6	-5.9%	120.1%	-20.7%	n/a	18.6%	-17.5%
06/1981-11/1982	18	-9.0%	-23.1%	-10.9%	-3.6%	6.0%	0.3%
08/1990-03/1991	8	-4.1%	-10.0%	2.6%	3.3%	-9.5%	-0.4%
04/2001-11/2001	8	6.4%	-5.9%	5.0%	1.3%	0.0%	19.0%
01/2008-06/2009	18	11.1%	28.4%	9.9%	0.2%	0.9%	18.3%
03/2020-04/2020	2	6.0%	4.3%	-0.9%	n/a	6.9%	11.8%
Average	**10.9**	**10.6%**	**10.9%**	**5.7%**	**2.9%**	**2.7%**	**2.6%**
Median	**9.5**	**6.2%**	**-8.0%**	**1.3%**	**1.5%**	**2.8%**	**4.6%**

Source: Reuters Eikon, Incrementum AG

The only investors who shouldn't diversify are those who are right 100% of the time.
John Templeton

Unsurprisingly, and in line with its reputation as a recession hedge, the gold price rises on average 10.6% during a recession. It is particularly noteworthy that gold performs positively in all phases of the recession. In phases 1 and 2, the mean of gold price increases is the most pronounced, which is probably due to the fact that the markets are most uncertain during these phases. Another explanation for the strong average performance of gold in phase 1 is the 120.1% price increase in the initial phase of the recession in 1980, which is an outlier.

In the first three phases of a recession, gold tends to outperform equities. However, as soon as the first signs of an economic recovery emerge and most of the market uncertainty subsides, the balance of power usually reverses and equities can outperform gold in the final and recovery phases. Consequently, the table shows that gold can be a suitable recession hedge, especially in the early stages of the model, **providing excellent diversification and stabilizing portfolio performance in turbulent economic times.**

In the following section, we would like to examine whether there are certain phases during a recession when commodities perform particularly well and whether they can be employed profitably in a portfolio during economic slowdowns.

Commodity (BCOM) Performance in the *Incrementum Recession Phase Model*

Date	Duration (months)	Recession	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
01/1970-11/1970	11	16.3%	-0.4%	3.3%	11.0%	1.4%	2.0%
12/1973-03/1975	16	26.4%	18.0%	18.5%	20.6%	-11.6%	4.7%
02/1980-07/1980	6	-6.5%	57.4%	-17.8%	n/a	13.8%	-13.8%
06/1981-11/1982	18	-26.7%	-25.2%	-10.9%	-19.5%	2.3%	8.4%
08/1990-03/1991	8	1.9%	2.0%	16.0%	-6.2%	-6.4%	-0.3%
04/2001-11/2001	8	-13.7%	-1.5%	-3.6%	0.6%	-11.0%	7.5%
01/2008-06/2009	18	-33.8%	9.0%	9.0%	-45.5%	11.6%	13.6%
03/2020-04/2020	2	-14.2%	-7.8%	-12.9%	n/a	-1.6%	18.0%
Average	**10.9**	**-6.3%**	**6.4%**	**0.2%**	**-6.5%**	**-0.2%**	**5.0%**
Median	**9.5**	**-10.1%**	**0.8%**	**-0.1%**	**-2.8%**	**-0.1%**	**6.1%**

Source: Reuters Eikon, Incrementum AG

To reduce risk it is necessary to avoid a portfolio whose securities are all highly correlated with each other. One hundred securities whose returns rise and fall in near unison afford little more protection than the uncertain return of a single security.
Harry Markowitz

The average recession performance of the BCOM Index since 1970 is clearly in negative territory at -6.3%. Thus, in our analysis, commodities perform worse than equities in the overall view. However, a closer look at commodities also reveals clear differences in each phase of a recession. While commodities post gains in phase 1 (lead phase) and phase 5 (recovery phase), there is no discernible trend in phase 2 (start phase) and phase 4 (end phase). **The negative performance thus largely occurs in phase 3 (middle phase), i.e., when the economy reaches its low**.

From a portfolio perspective, according to our analysis, overweighting commodities in the run-up to and recovery phase of a recession proves to be prudent. Theory supports this finding and suggests that precious metals, and gold in particular, are suitable as a hedge against uncertainty before the peak of a recession. Energy and base metals also prove beneficial due to the reflationary effect of picking up growth after the peak of a recession.

Conclusion

If money is your hope for independence, you will never have it. The only real security that a man will have in this world is a reserve of knowledge, experience, and ability.
Henry Ford

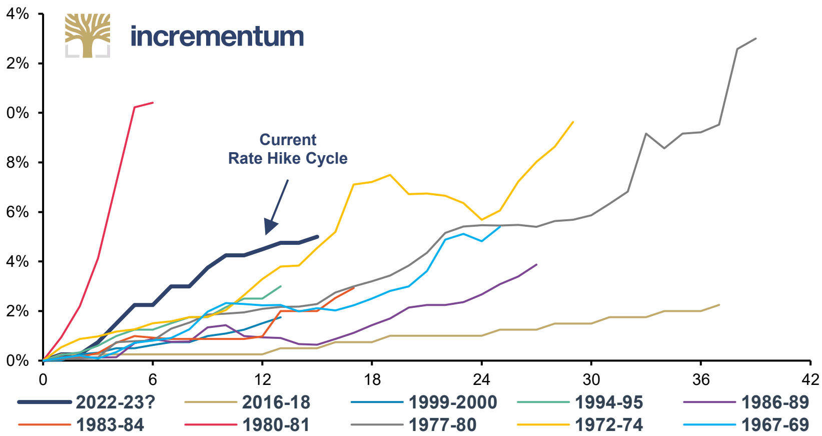
The most-anticipated recession is still stubbornly waiting to happen. On the one hand, this is related to the growth spurt in connection with the post-Covid-19 reopenings, which is only slowly subsiding. Also, the horror scenarios of summer and fall 2022, when energy prices skyrocketed, have not materialized. On the other hand, the ascendance of fiscal policy as an expression of *monetary climate change*, which we analyzed in detail in the *In Gold We Trust* report 2021, is also a contributing factor. Fiscal policymakers are thus taking over the role of central bankers by injecting liquidity into the markets through significant transfer payments to households and companies.[36] In our view, this behavior is not sustainable, because it merely postpones the recession – at the cost of continued monetary devaluation, which will ultimately most likely end in stagflation.

This dynamic is also underlined by the latest published data on economic growth and the core inflation rate in the USA. In the first quarter, real US GDP grew by only 1.1% annualized, which was clearly below expectations. On the other hand, the core PCE rate remains stubbornly high. Since the March 2022 high of 5.3%, it has so far only fallen to 4.6%, a much weaker decline than that of headline inflation.

Monetary policy is 98% talk and only 2% action.
Ben Bernanke

The longer we wait for the recession to arrive, the worse it could be when it finally does. This is due to the Federal Reserve's ability to uphold its hawkish policy stance for an extended period, which will cause the economy to slide deeper into recession because, on the one hand, liquidity and financing conditions will have remained restrictive for a longer period and, on the other hand, it will take longer for the pivot to take effect and reach the real economy. Following the most drastic surge in interest rates in nearly four decades, the pressing question emerges of when and how swiftly the Federal Reserve will execute its monetary policy U-turn in order to address the ongoing weakening of the economy.

Fed Rate Hike Cycles, Federal Funds Rate, 1967-2023



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

[36] *See* the short version of our interview with Russell Napier in this *In Gold We Trust* report: "Exclusive interview with Russell Napier: Save Like a Pessimist, Invest Like a Pessimist". The long version of this interview is available here; and "Yield Curve Control, the Biggest Mistake of the ECB So Far! – Exclusive Interview with Russell Napier," *In Gold We Trust* report 2021

But a recession is a necessary process that corrects undesirable developments in economic growth. It leads to a restructuring of the production process, adjustment of prices to actual consumer preferences, and correction of misallocations. The longer this process is delayed, the more painful it becomes.

Anyone who is capable of getting themselves made President should on no account be allowed to do the job.
Douglas Adams

Particularly in the context of the upcoming US elections next year, the Democrats will very likely strive to avoid a recession. This could lead to fiscal policy measures – in line with the *whatever it takes* mentality that has come into vogue – that further delay the inevitable adjustment process. However, the constraints on room to maneuver are inexorably increasing and the options for postponement are dwindling. **To resolve this dilemma between short-term voter favor and long-term economic stability, those responsible must finally live up to their name.**

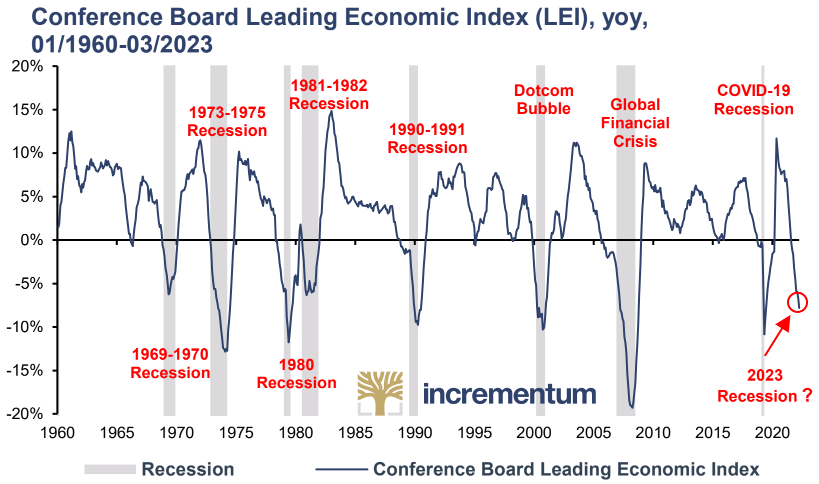
The approaching recession, washed up by the wave of inflation, may not be too far off, as the following table shows. **Four leading economic indicators have consistently predicted every recession so far – and currently, all of them are signaling a recession again.**

History of Selected Recession Indicators and Current Status

Recession indicator	Number of observations	Probability of occurrence of a recession	Months since the event
LEI yoy < -4%	8	100% (within 24 months)	6 months
2Y10Y inversion	10 (since 1950)	90% (within 36 months)	10 months
3M10Y inversion	4 (since 1990)	100% (within 24 months)	6 months
ISM new orders < 47	12	100% (within 24 months)	5 months
M2 yoy negative	First time since 1960	-	4 months
Fed rate hike cycle	8 (since 1970)	85% (within 24 months after end of cycle)	-
Credit policy tightening > 40	4	100% (within 24 months)	7 months
US key interest rate - 2Y > 90 bp	5	75%	2 months

Source: BofA Global Research, Incrementum AG

Particularly worth mentioning in this context is the Leading Economic Index (LEI), which combines 10 leading indicators and is designed to predict the dynamics of the economy for the coming quarters. It can thus be seen as a comprehensive and weighted recession indicator.



Source: Reuters Eikon, Incrementum AG

There is no real historical precedent for the idea of a managed disinflation from current levels without recession.
Lawrence Summers

The index has now fallen for 12 consecutive months and is at its November 2020 level. A 7.8% year-over-year decline has historically signaled a recession. In total, there have been eight recessions since 1960, in which the LEI peak averaged 14 months before the recession began. The median is 11 months.[37] **The LEI successfully predicted all eight of these recessions.** The current index peak is dated December 2021, making it 17 months since the last index peak. A recession would therefore appear to be overdue. Additionally, in terms of its magnitude, the annual change rate of the LEI is currently at -7.8%, which is lower than its average value before a recession (-4.7%).

Even though black swan events, i.e. unpredictable events, shake the markets time and again, it is important to prepare meticulously for *foreseeable* events and to develop a strategy. In this case, from an investor's perspective, there are two events in particular that are in focus and present challenges: **the upcoming central bank pivot and an impending recession.**

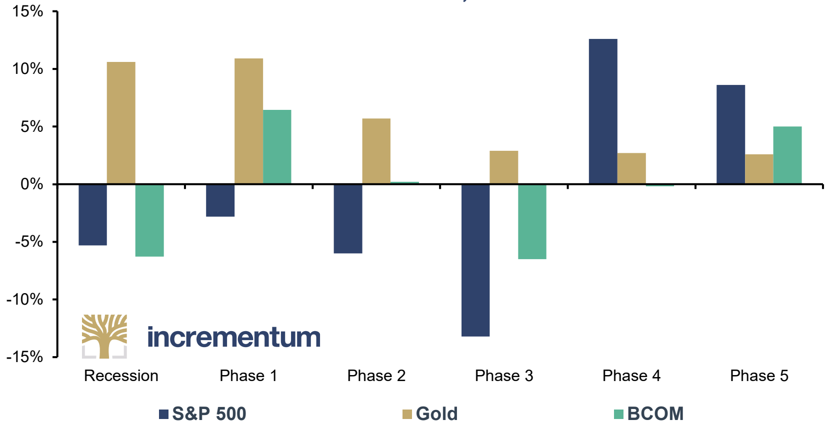
The ***Incrementum Recession Phase Model*** provides valuable insights and helps in deciding how best to act in each of the five recession phases to make the portfolio more resilient to economic downturns. **Evaluation of our model for equities, gold, and commodities shows that asset performance can sometimes diverge significantly in each of the five recession phases**.

Just because nobody complains doesn't mean all parachutes are perfect.
Alfred Hawthorne Hill

Gold clearly stands out as a recession hedge. In all phases, gold was able to gain on average. However, the average gold performance gradually declines as the recession progresses. Towards the end of the recession, it is commodities and, above all, equities that benefit from the waning recession or recover their losses, which in both cases are largely suffered in the middle phase of the recession.

[37] *See* "Breakfast with Dave," Rosenberg Research, April 21, 2023

Average Performance of S&P 500, Gold, and BCOM in the *Incrementum Recession Phase Model*, 1970-2023



Source: Reuters Eikon, Incrementum AG

Exclusive Interview with Zoltan Pozsar: Adapting to the New World Order

2% and going back to the old world – I don't think it stands a snowball's chance in hell. Low inflation is over and we're not going back.

Zoltan Pozsar

- **We are moving into a multipolar reserve-currency world where the dollar will be challenged by the renminbi and the euro for reserve currency status.**
- **These currencies, especially the renminbi, would not necessarily be used as a reserve currency, but rather to settle trade. Gold could play an increased role here.**
- **The fact that China is running current account surpluses does not exclude their currency from becoming a global reserve currency. In fact, the US ran surpluses post-WW2, and this led the dollar on its global reserve currency path.**
- **The Chinese are using swap lines to settle international trade accounts. This is a fundamentally different approach from the dollar reserve framework and would mean that trade can occur in renminbi without nations needing to hold vast reserves of the currency.**
- **The various crises that today's financial market participants have witnessed were solved by throwing money at whatever problem arose. The current inflation problem is different.**
- **This situation is also vastly different from the late 1970s, when Paul Volcker curbed inflation by prolonged high interest rates. Chronic underinvestment in the resource sector and labor issues will cause inflation to remain sticky.**
- **The traditional 60/40 portfolio allocation will struggle in this environment. Zoltan recommends a 20/40/20/20 (cash, stocks, bonds, and commodities) allocation.**

Zoltan Pozsar is one of the most widely followed investment strategists in the world today. Zoltan was a senior adviser to the US Department of the Treasury, where he advised the Office of Debt Management and the Office of Financial Research, and served as the Treasury's liaison to the FSB on matters of financial innovation.

Zoltan was deeply involved in the response to the global financial crisis and the ensuing policy debate. He joined the Federal Reserve Bank of New York in August 2008 in charge of market intelligence for securitized credit markets and served as point person on market developments for senior Federal Reserve, US Treasury and White House officials throughout the crisis; played an instrumental role in building the TALF to backstop the ABS market; and pioneered the mapping of the shadow banking system which inspired the FSB's effort to monitor and regulate shadow banking globally.

Later at the IMF he was involved in framing the Fund's official position on shadow banking and consulted G-20 working groups. He consulted G-7 policymakers, central banks and finance ministries on global macro-financial developments.

Ronnie Stöferle and Nikolaus Jilch conducted an interview with Zoltan Pozsar on April 26. 2023.

We are publishing the highlights of the interview below. **The full version of the interview is available for download** here**.**

Ronnie Stöferle
Zoltan, thank you very much for taking the time. It's a great pleasure. Here with me is my dear friend Niko Jilch, financial journalist and a very-well-known podcaster. Niko, thanks for taking the time.

Niko Jilch
Hi, Zoltan, it's very nice to meet you. I've been reading all your stuff lately.

Zoltan Pozsar
It's very good to meet both of you. Thank you for the invitation.

Niko Jilch

Why are central banks stockpiling gold and do you think that is going to accelerate?

The Hungarian central bank was among some of the European central banks buying gold recently. Europe already has a lot of gold. **Why are central banks stockpiling gold and do you think that is going to accelerate?** What are you looking at in this regard?

Zoltan Pozsar
Yes, I think it's going to accelerate. I think reserve management practices, the way central banks manage their foreign exchange reserves, is going to go through transformative change over the next five to ten years. There are a number of reasons for this. One reason is that geopolitics is a big theme again; **we are living through a period of "great power" conflict**.

The dollar is not going away overnight, and it's going to still be a reserve currency and used for invoicing and trade and all that in parts of the world. But there will be other parts of the world that are not going to rely on the dollar as much.

We can mention these great powers: China, the US and Russia and their various proxies. But trust in the dollar – I have to be careful about how I phrase this – the dollar will still be used as a reserve currency in certain parts of the world, but there will be other parts where that's no longer going to be the case. **The dollar is not going away overnight, and it's going to still be a reserve currency and used for invoicing and trade and all that in parts of the world. But there will be other parts of the world that are not going to rely on the dollar as much**. One example would be Russia. Russia's forex reserves have been frozen. That means that their dollars and euros and yen assets became unavailable for use.

There's legal risk, there's sanctions risk, and there's geopolitical risk. If you look at the world in terms of two camps – aligned and nonaligned, East and West, and so on – some regions, the global East, the global South, the nonaligned regions, and the ones that have foreign policy conflicts or disagreements with the United States, will, I think, be less likely to use the dollar as a reserve asset.

Since the outbreak of hostilities in Ukraine and the freezing of Russia's forex reserves, foreign central banks' purchases of gold have accelerated quite a bit.

There's a number of subplots to this. They will be looking for other reserve assets as an alternative. **I think gold is going to feature very prominently there. As a matter of fact, since the outbreak of hostilities in Ukraine and the freezing of Russia's forex reserves, foreign central banks' purchases of gold have accelerated quite a bit.**

When you hold reserves in the form of US dollars, you ultimately are going to hold those in either bank deposits in a bank that's ultimately controlled by a state, or at a central bank controlled by a state, or in US government securities or other sovereign debt claims that are ultimately controlled by a state.

We see this in the IMF data; we see this in the data published by the World Gold Council; you read about it every day in the financial press. The difference between gold and US dollars as a reserve asset is: The textbooks refer to the latter as "**inside money" and gold as "outside money"**. What that means is that when you hold gold and you physically hold it in your country, in the basement of your central bank, you basically control that monetary base. But **when you hold reserves in the form of US dollars, you ultimately are going to hold those in either bank deposits in a bank that's ultimately controlled by a state, or at a central bank controlled by a state, or in US government securities or other sovereign debt claims that are ultimately controlled by a state**. Thus, you're not really in control of that money; you're basically always at the mercy of someone giving you access to it and basically reneging on that access and that promise.

Foreign countries hold US dollars as FX reserves because at the end of the day you need to have some currency in reserve that you will be able to tap into as a country to import essential goods.

That is one reason why the world is looking at alternatives. I would add two other things that are going to change reserve management practices. **Foreign countries hold US dollars as FX reserves because at the end of the day you need to have some currency in reserve that you will be able to tap into as a country to import essential goods.**

When people think about why central banks hold FX reserves, there's only a few reasons:

1. **You need to import oil and wheat and whatever you don't produce at home, and the price of commodities is denominated in US dollars and it's invoiced in US dollars. There's no way around it. Essentials that you import are priced in dollars.**

2. **When the local banking system has dollar liabilities and there's some crisis, you have** to **provide some backstop to that; or if your corporations borrow too much offshore in US dollars, and they run into problems, you will have to cover that.**

3. There is a new theme where, in addition to gold, **foreign central banks are going to start accumulating currencies other than just the dollar because there will be more oil that's going to be invoiced in renminbi and other currencies.** It's no longer the case that countries can rely only on dollars to import essentials that they need.

In a multipolar world, will there be one single reserve currency, or do we have to get rid of that thought?

Niko Jilch

You wrote about the birth of the petro-yuan, and Europe regularly tries to do energy deals using the euro. **In a multipolar world, will there be one single reserve currency, or do we have to get rid of that thought?** Europe has aligned itself with the US and they have sanctioned Russian currency reserves. Thus, China and Russia have turned hostile against the euro. Do you consider the euro basically just the "dollar-lite" at this point, or is it an alternative? Reserve currency-wise, it is still number two.

Zoltan Pozsar

I think there will be three dominant currencies: the dollar, the renminbi, and then the euro is going to be like a third wheel.

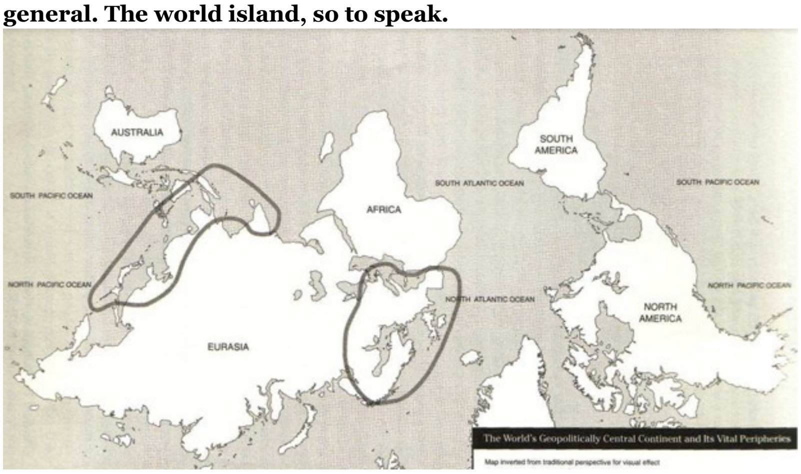
I think there will be three dominant currencies: the dollar, the renminbi, and then the euro is going to be like a third wheel. The euro was a very important creation in many respects. **One reason why it was so important is that it gave Europe the ability to pay for its commodity imports with its own currency**. It gave Europe commodity import bill sovereignty, if you will. **They didn't have to hustle to earn dollars to be able to import the oil and gas that they need, because the OPEC countries and Russia took euros from them.**

China is reducing the dollar's weight in its basket, but it's increasing the euro's weight.

There's obviously going to be a change in a world where you will be more dependent on energy imports from North America. The US will demand dollars for their energy exports. The other thing about the euro is that **China is reducing the dollar's weight in its basket, but it's increasing the euro's weight**. It's kind of a hard question to answer because **Europe is a great prize in this "great game" of the 21st century, which China is going to be playing on the Eurasian landmass and in Africa and the Middle East**. Where the gravitational pull of things will fall, Europe going forward is a big question in terms of the euro's status as a reserve currency and whether their share is going to go up or down.

Europe is at the geographical end of the Belt and Road Initiative.

Europe is at the geographical end of the Belt and Road Initiative, so there's that pull on the one side and then there's the trans-Atlantic pull. We will have to see how that transpires, but I think it's helpful to frame your thinking about the next five to ten years in macro, money, interest rate markets and global economics as follows: **There is Belt and Road and Eurasia; it's all of Asia, all of Europe and the Middle East, Russia, North Africa and Africa in general. The world island, so to speak.**



Source: Zbigniev Brezezinsky – The Grand Chessboard

Everything that you see in terms of supply chains and globalization is going to also happen in the world of money, because supply chains are payment chains in reverse.

Then there is what we refer to as the G7. North America, Australia, Japan and other little islands and a peninsula here and there. These are basically the two "economic blocs". If you think about the macro discourse, we are talking about the aligned countries and nonaligned countries. **Everything that you see in terms of supply chains and globalization is going to also happen in the world of money, because supply chains are payment chains in reverse.**

Eurasia is looking like a renminbi slash gold block. Then what we refer to as the G7 looks like a dollar block.

If you realign supply chains along the lines of political allegiance – who is your friend and who is not – you will also realign the currency in which you will invoice some of these supply chains and trade relations. **Eurasia is looking like a renminbi slash gold block. Then what we refer to as the G7 looks like a dollar block.**

I think Europe is a question mark in there. It's going be fought over.

Ronnie Stöferle

Isn't it important to differentiate between a reserve currency and a trade currency?

We've observed French president Macron going to China recently, causing some turbulence, especially in the US, when he said some things that Americans didn't appreciate. **Isn't it important to differentiate between a reserve currency and a trade currency?** I think for the renminbi to become a trade currency for trading oil and gas is pretty easy. But to become a reserve currency, wouldn't they have to open up their capital accounts, deepen their capital markets, and let the renminbi start to float?

Zoltan Pozsar

Becoming a reserve currency is a 20-year journey.

I get that question a lot. What I usually answer to that is: Babies are not born walking and talking and trading interest rates; it's a 20-year journey. They are born and then they stumble around; then they formulate sentences; then they make their case and decide what they want to do in life, and then they do it in life. Then they have a midlife crisis.

The US became a reserve currency with a current account surplus. It's just that things later changed and then they turned to running a deficit.

The dollar has gone through all of that. After the Second World War, when we read the history books, it became the reserve currency, but it was still a journey to get there. Post-war reconstruction of Europe and Japan and the Marshall Plan. The US was running current account surpluses, much like China is running current account surpluses today. The US was providing financing to Germany, the UK and Japan to import all the stuff from American companies that they needed to build out their industries.

The US became a reserve currency with a current account surplus. It's just that things later changed and then they turned to running a deficit.

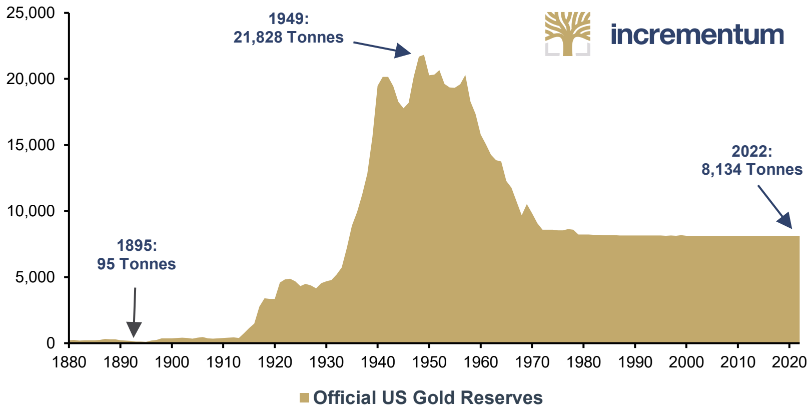
I am amazed when people say that China and the renminbi are becoming something big, but they have a current account surplus, so they cannot become a reserve currency. **The US became a reserve currency with a current account surplus. It's just that things later changed and then they turned to running a deficit.**

The young generation of traders and market participants conceptually understand the dollar as a reserve currency, but are unaware that that status was born out of a surplus position.

Ronnie Stöferle

The US also had more than 20,000 tons of gold, which was pretty important in establishing that trust in the dollar.

Official US Gold Reserves, in Tonnes, 1880-2022



Source: World Gold Council, Incrementum AG

Zoltan Pozsar

There's a mechanism through which China is going to provide the world the renminbi that the world doesn't have but will need in order to import stuff from China, and that's swap lines.

Yes, exactly. All the gold flows went there, and that is where it started from. The fact that China is running current account surpluses is fine. **There's also a mechanism through which China is going to provide the world the renminbi that the world doesn't have but will need in order to import stuff from China, and that's swap lines.** It's not going to be like a Marshall Plan, but there are mechanisms through which China is going to pump money into the system.

China reopened the gold window in Shanghai with the Shanghai Gold Exchange. There's that convertibility of offshore renminbi into gold if someone so wishes.

The second thing is that China reopened the gold window in Shanghai with the Shanghai Gold Exchange. There's that convertibility of offshore renminbi into gold if someone so wishes; that's another important feature. Renminbi invoicing of oil has been happening for a number of years now, with all the usual suspects – Russia, Iran, Venezuela – but now it's going to happen with the Saudis and the GCC [Gulf Cooperation Council] countries at large. We are starting to see copper deals that are priced in renminbi with Brazil. When you read the statements and listen to the BRICS heads of state, they have an agenda. They are all busy de-dollarizing their cross-border trade flows; they are accepting renminbi as a means of payment; they are launching central bank digital currencies, which just basically means that they will bypass the Western banking system, for reasons we'll discuss.

The money you have in the Western banking system is only yours if the political process that those banks ultimately report to or exist in allows you access to this money.

The money you have in the Western banking system is only yours if the political process that those banks ultimately report to or exist in allows you access to this money. When that trust is broken, you start building out your alternative payment and clearing systems.

China and the BRICS countries are basically doing with the renminbi all these steps that don't seem to add up to much when you read about them in isolation; but when you look at them in the totality of things, and when you take a 10-year perspective about what they have been building, it adds up to quite something.

China is not blocking capital outflows with capital controls.

The other thing I would say is there's capital flight from China. People want to keep their money anywhere but in China. Although certain countries have no option but to keep their money in China, other people want to keep their money elsewhere. **I think it's important to point out that China is not blocking those capital outflows with capital controls.**

Outflows of capital from China mean that FX reserves are getting drained, which I don't think China minds per se, because they are draining themselves from "geopolitically hot" assets. If capital flees because some domestic rich person thinks their money is safer in a condominium in New York, and they want to drain FX reserves to buy something, fine… that's his problem, not the state's problem anymore.

Things are moving in a direction where a large part of the world is going to use the renminbi to a much larger extent.

Depending on how you look at these things and the perspective you want to take, things are moving in a direction where a large part of the world is going to use the renminbi to a much larger extent. That's a path toward becoming a major trade *and* reserve currency.

These days, we deal with liquidity crises through swap lines.

The other thing I would say about the reserve currency question is this: people have stashes of dollars because you need them in a crisis. **That kind of thinking and that body language if you're a central bank, came of age in an era where you didn't have the dollar swap lines**. And because you knew that if you're short dollars, the next thing you're going to have to do is go to the IMF and that's going to be very tough and painful. China has a swap line with everybody. As a result, nobody will have to hoard renminbi to be able to trade with China. Had these swap lines existed in the 1980s, Southeast Asia would have had a different financial crisis than in 1997 – it was a liquidity crisis. **These days, we deal with liquidity crises through swap lines.**

The journey for the renminbi to a reserve currency is that countries will start accumulating it; it's going to be managed through swap lines.

I mention this because I don't think that the journey for the renminbi to a reserve currency is that countries will start accumulating it; it's going to be managed through swap lines. I keep on re-reading President Xi's address to the GCC leaders; there's a lot to unpack there. He says, "*We are going to trade with each other a lot more and we are going to invoice everything in renminbi*" and "*You will have a surplus, I will have a deficit; or I will have a surplus and you will have a deficit, and then there's going to be an interstate means of how we are going to recycle and manage the surpluses and deficits*".

It seems to me that what the Eastern vision for the Eurasian landmass under Belt and Road looks like from a monetary perspective is that there will be interstate mechanisms to recycle surpluses and deficits. And it's not going to be as driven by the private sector as the dollar system is being driven by it; it's going to be a more managed system. That's how I think about China and renminbi as a reserve currency, more of a trading and invoicing service, or something like that.

Would you agree that we should not be too scared of global conflict or war, as it could also have positive effects like innovation, higher productivity, and so forth?

Ronnie Stöferle

Your most recent pieces were called "War and Interest Rates", "War and Industrial Policy", "War and Commodity Incumbrance", "War and Currency Statecraft", and "War and Peace". I very much enjoyed reading them. I just picked up a report by Marko Papic from the Clocktower Group. The piece is called "War is Good", which sounds quite counterintuitive; but he makes the point that investors should avoid extrapolating geopolitical disequilibrium into global conflict. He said that as we have previously seen in history, this multipolarity has for decades, even centuries, also led to an enormous amount of technological innovation. He also sees multipolarity injecting a burst of capex that will probably lead to higher inflation in the short term, but for the longer term this should be disinflationary. **Would you agree that we should not be too scared of global conflict or war, as it could also have positive effects like innovation, higher productivity, and so forth?**

It's war, nonetheless. It comes down to rare earths and oil and gas – commodity resources and genuine physical stuff.

Zoltan Pozsar

Certain types of war can be good. We are in an age of unrestricted warfare, not just land, air and sea shooting at each other. If war is about technology, money, the control of commodities. etc., then there is no blood. But **it's war, nonetheless. It comes down to rare earths and oil and gas – commodity resources and genuine physical stuff.** You don't really want to think about history as being completely obsolete.

Wars have historically been fought over physical resources, land and industries.

We need to be careful here, because we don't want to reimagine history here, going forward. With the Napoleonic Wars and the Crimean Wars and First and Second World War, **physical resources, land and industries, that's the stuff you fought over**. It's hard to imagine that all conflict in the future will be about bits and bytes and data and spreadsheets and balance sheets. There is risk here. I think war is not good, because it's a very risky game. Now, it usually happens in the domain of trade and technology and money, and then it spills over into uglier forms.

The catalyst for everything that we are talking about is a very tragic hot war with a very tragic civilian aspect, in Ukraine. I don't think that war is good. Yes, it is going to be a catalyst for change, and this is going to mean a lot more investments**. As I articulated in my thesis, we are going to pour a lot of money into rearming, reshoring, friendshoring, and energy transition.** But again, all these themes are going to be very commodity-intensive and very labor-intensive. It's going to be "my commodity" and "my industry" and "my labor" versus yours.

The Fed can raise interest rates to 10%; we are still going to rearm; we are still going to friendshore; we are still going to pursue energy transition.

It's not just a US versus China thing, it's a US versus Europe thing as well, so it's going to be very political. None of these things are going to be interest-rate-sensitive. **The Fed can raise interest rates to 10%; we are still going to rearm; we are still going to friendshore; we are still going to pursue energy transition;** because these are all national security considerations, and national security doesn't care about the price of money, i.e. interest rates. Maybe 5-10 years down the road we are more self-sufficient and such, but I think the next five years are going to be complicated from an exchange-rate, inflation, and interest-rate perspective. My "War" dispatches were not "happy" pieces.

Ronnie Stöferle
I think the title was meant to be provocative on purpose. Marko Papic is from Yugoslavia, so he knows what war is about. He was referring to the competition and innovation that could happen when there's new forces coming up. I wanted to ask you, regarding the topic of inflation, up until last year, central bankers all over the globe were telling us, it's transitory, there's no stagflation, and "It looks like a hump" (Christine Lagarde).

Then, the Federal Reserve, especially, reacted very, very aggressively. Now we are seeing something that Gavekal calls "*pessimistic bulls*", investors hoping that inflation rates will come down, that this will influence the Federal Reserve; and this will lead to us going back to the old regime where, when the Fed surprises, they only surprise in one direction and that direction is up. One of our takes is that we will see much more inflation volatility. **The "Great Moderation" is over; forget about that**. We see upcoming inflation volatility in inflationary waves.

Would you say that the first inflationary wave is over and that we should expect more inflationary waves?

Would you say that the first inflationary wave is over and that we should expect more inflationary waves? There's now this very close co-operation between monetary and fiscal policy. We're seeing problems in demographics, in the labor market, deglobalization, things like that. Would you say that we will go back to the times when 2% was the upper limit for inflation?

Zoltan Pozsar
Two percent inflation and going back to the old world, I don't think it stands a snowball's chance in hell. Low inflation is over and we're not going back. There are a number of reasons for that.

1. **Inflation has been a topic for three years now.** We started to fight it a year ago, but it's been a part of our lives for much longer. The CPI is up, I think, 20% since the pandemic and wages are up about 10%. There's still a deficit in terms of what your money buys versus this statistical artifact that's the CPI. Everybody has their own basket. There's a saying: "Inflation expectations are well anchored when nobody talks about inflation". Now, it's increasingly hard to talk to any investors without talking about inflation. So, inflation expectations are not well anchored anymore.

2. **Wall Street and investors are very young.** This is an industry unlike physics, where we all stand on the shoulders of earlier giants – physics is a science where knowledge is cumulative. Finance is cyclical; you make your money in the industry and then you retire and grill tomatoes. Then everybody else has to relearn everything you knew and again retire that knowledge as they go along. If you're young, let's say 35-45 years old, you haven't really seen anything but lower interest rates and low inflation. In terms of how you think about inflation, it's a new skill you have to acquire, because it's not a variable you had to think about in the past.

What that means in practical terms is that there's this tendency to think about inflation as if it was another basis on a Bloomberg screen that blew out, and it's going to mean-revert. What do I mean by that? At your age and my age, our formative experiences in financial markets are the Asian

Financial Crisis, 2008, some spread blowouts since 2015, the Covid pandemic; all of these things were crises of bases where FX spreads were broken, and then AAA CDOs and AAA Treasuries turned out to not be the same thing. There was a basis between those two, and the cash/Treasury futures basis broke down in March of 2020, when the pandemic hit and we didn't really have a risk-free curve for a couple of days until the Fed stepped in.

All you need to do to fix these dislocations is, you throw balance sheet at the problem.

These are all easy things, because all you need to do to fix these dislocations is, **you throw balance sheet at the problem**, which in English means **someone has to provide an emergency loan or you have to do QE and pump money in the system; and then, once the money is there, the basis dislocations disappear**.

These are easy problems. With inflation there is a clear difference.

Just as the UK had this mini budget problem, we have the problem with SVB. All we had to do is say, **"*Here, we give you money, we guarantee deposits, problem solved*". So, these are easy problems. With inflation there is a clear difference**. And I think we are in love with this idea that Paul Volcker is a national hero because he raised rates to 20% and "that's all it takes to get inflation down". Well, not really. Paul Volcker is a legendary policymaker, but he was lucky. There are two reasons I will mention.

1. The OPEC price shocks that precipitated the inflation problems happened in the early 1970s. When prices go up, people start drilling more; and supply increased in that decade after the OPEC price shocks. This was the period when the North Sea oil fields were developed, and Norway started to pump in the North Sea and Canada drilled more and Texas drilled more and we were just swimming in oil. Then Paul Volcker arrived in the early 1980s, raised interest rates and caused a deep recession, and the demand for oil and oil prices collapsed. So that's fantastic. More oil, less demand. That's how you get inflation down.

2. The second thing was the labor force back in Volcker's time. There were more people working because of the boomer generation, and female labor force participation was going up, so there was a lot of labor coming in. Also, the politics around wages was changing, because in 1981 President Reagan famously fired air traffic controllers because they dared to go on strike. So, it's easy to get inflation down when energy and labor are going down for fundamental reasons. There's more supply, and politics is supportive.

Today, oil prices are elevated and we haven't invested in oil and gas for a decade. Geopolitics is just getting worse. For Volcker it had got worse the decade before, and he was dealing with a very stable geopolitical environment by the time he was fighting inflation.

Now, the oil market and all other commodities are tight and geopolitics is getting nastier – look at the OPEC production cuts. OPEC+ wants to target USD 100 per barrel; we are below that. Probably they are going to cut more to get up to where they want to be in terms of target. The SPR has never been lower in history.

Labor? Very different from Volcker's backdrop. The baby boomers are retiring, and millennials just don't hustle as much as boomers did. The older millennials, the young generation today, all go to college; but they don't have to work on the margin to put themselves through college, because student loans are flowing from the faucet, and their parents are richer, so the parents are going to put them through school.

We have a stagnant labor force participation rate that's actually falling on the margin; and we have a severe labor shortage, which only immigration can fix. But that's not an easy solution and it's also quite political. We have a skills gap where most of the jobs don't require a college degree, but everybody that's entering the labor force is overeducated for some of these jobs. That keeps the labor market from clearing.

People tend to overthink inflation and get technical about core inflation and this and that.

The US labor market used to be something we were proud of, what made us different from Europe. In Europe, you can't move around, because of the language barriers. If you speak German, you can't have a job in France. That was not a problem in the US; you could just put your house up for sale and go to a different state. But, when mortgage rates are through the roof and housing is expensive, especially in the hot areas where you could get a job, you're just not going to move around as much. So now there's a labor mobility problem. **This is a very different backdrop. I would say that people tend to overthink inflation and get technical about core inflation and this and that.**

The labor market is ridiculously tight. I don't think unemployment is going to go up much during this hiking cycle.

There are two things to keep in mind. The labor market is ridiculously tight. I don't think unemployment is going to go up much during this hiking cycle. Because, if you're an employer and you're lucky enough to have the staff you need, you're not going to get rid of them, because you will have a hard time hiring them back. If unemployment doesn't really go up, the wage dynamics are going to remain robust in a very tight labor market; and that matters for services inflation, which is determined by the price of labor.

Then, on the other side, what you need to look at are the prices of food and energy, both of which are stochastic, and they are caught up in geopolitics. **So, if you want to take a guess: Food and energy prices, do they have more upside or downside?**

If the price of necessities is going up, and the labor market is tight, there's going to be a lot of feedthrough from higher headline inflation to higher wage inflation; and core goods.

Probably more upside, because things are tight, things are geopolitical, mine versus yours. And that's necessities – **if the price of necessities is going up, and the labor market is tight, there's going to be a lot of feedthrough from higher headline inflation to higher wage inflation; and core goods**, whatever that is, doesn't really matter as much. This is the price of flatscreen TVs and the price of used vehicles. Frankly, if you're the Federal Reserve, you're not going to care about used vehicle prices and the price of flatscreen TVs and D-RAM chips and all that stuff, because it's not the type of thing that is going to determine what people are asking for in terms of wages.

I like to say that *people go on strike not because the price of flatscreen TVs goes up, but because the prices of food, fuel and shelter go up and you can't make a living*.

Inflation is going to be a persistent problem, and it's just wishful thinking when the market thinks that we are going to be cutting interest rates by the end of the year.

So, I think that's the near-term environment, and I think what we are seeing is that interest rates have gone from zero to five percent. We have had little local fires, which the Bank of England and the Fed were very eager to put out as soon as they surfaced. Crises that were dealt with very quickly. But we don't really have much progress to show for all these interest rate hikes. Housing is slowing and demand for cars is slowing, but unemployment is still very low. When you look at the earnings of consumer staple companies like Nestlé or Coca Cola, or Procter and Gamble, you don't really see the economy falling off a cliff. People are eating price increases, and it's not like they are spending less. **It's going to be a persistent problem, and it's just wishful thinking when the market thinks that we are going to be cutting interest rates by the end of the year.**

We've done QE for more than 10 years. That's like a lifetime in finance.

Everybody who has assets and anybody who grew up as a financial market professional, **don't forget that we've done QE for more than 10 years. That's like a lifetime in finance**. But that's not the only thing that can happen. Yeah, things are painful, but this is in terms of getting inflation down to targets. Unemployment is still three and a half percent, so I don't really see the pain in the economy. More will be necessary.

I think it's important to think about inflation in cyclical terms near-term, as in what happens to it because of the hiking cycle. What I just told you there is, **inflation is probably going to be stickier than you think. Definitely for the next one or two years**. Tight labor markets, high wage inflation, core inflation, all well above target, around four or five percent.

Rearming and reshoring and energy transition; this is going to be like an investment renaissance that's coming.

The second thing is these industrial policy things that we talked about. Rearming and reshoring and energy transition; this is going to be like an investment renaissance that's coming. We can already read about the Inflation Reduction Act with billions in investment so far in its first year, and there's a lot of stuff coming. Recessions are usually not associated with an investment boom. The longer inflation persists, and if the Federal Reserve doesn't manage to drive us into a recession where unemployment goes up meaningfully, I think we're going to run out of time, because all these investment themes are gathering momentum. And once they gather momentum, as I said, it's going to require a lot of labor and a lot of commodities. That's just going to add to the inflation problem and it's going to make the Fed's job more complicated.

Niko Jilch
This brings up a core question that everybody wants to know the answer to. How do you invest for this environment; what assets do you expect to do well?

Our new portfolio allocation should be 20% cash, 20% commodities, 20% bonds and 40% stocks.

Zoltan Pozsar
I think this means all sorts of bad things for a 60/40 portfolio, the standard portfolio construction. At the very least, you need to do something like 20/20/20/40. Meaning 20% cash, 20% commodities, 20% bonds and 40% stocks.

Cash and commodities make sense to me for the following reasons. Cash used to be like a dirty asset, because it didn't yield anything. But cash now yields a substantial amount. We shouldn't be punting on the back end of the curve at about the 10-year yield, because if the market is wrong about recession and rate cuts and inflation, the US 10-year Treasury yield is going higher, not lower from here. **When the yield curve is inverted, cash is actually a very nice asset**; it gives you a very decent yield, the highest yield along the curve; and it gives you option value, which means that if you find some great assets to buy, you can. Commodities, I think, are equally important because, as I said, we are underinvested. **Commodities are fundamentally tight; geopolitics is messing up commodities and resource nationalism is on the rise.** Even if the supply is there, it's going to come with special terms attached, and that's going to mean higher prices, not lower.

Within that commodities basket, I think gold is going to have a very special meaning, simply because gold is coming back on the margin as a reserve asset and as a settlement medium for interstate capital flows.

Within that commodities basket, I think gold is going to have a very special meaning, simply because gold is coming back on the margin as a reserve asset and as a settlement medium for interstate capital flows. I think cash and commodities is a very good mix. I think you can also put, very prominently, some commodity-based equities into that portfolio and also some defensive stocks. Both of these will be value stocks, which are going to benefit from this environment. This is because growth stocks have owned the last decade and value stocks are going to own this decade. I think that's a pretty healthy mix, but I would be very careful about broad equity exposure and I would be very careful of growth stocks.

These were highlights of our interview with Zoltan Pozsar, "Adapting to the New World Order".

The full transcript, where we discuss more topics, including Zoltan's views on recency bias, Niko and Ronnie making the case for Bitcoin and what books Zoltan is currently reading is available for download here.

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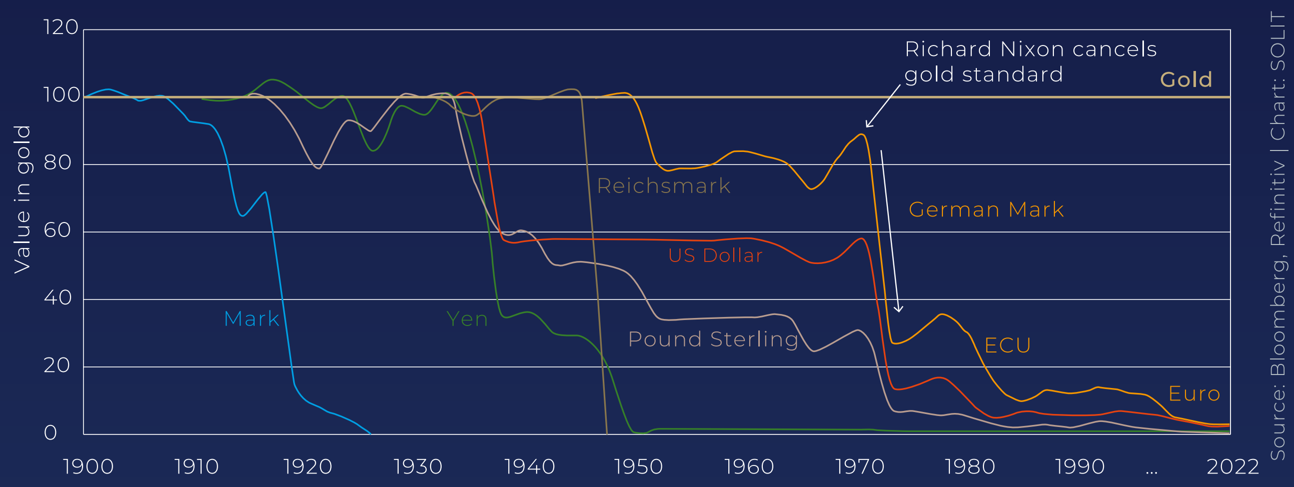
The Golden Constant



Poison

"In order to destroy the bourgeois society, one must devastate its monetary system."

Wladimir Lenin

Antidote

"In the absence of the gold standard, there is no way to protect savings from confiscation through inflation."

Alan Greenspan, Fed President 1987-2006

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De-Dollarization: The Final Showdown?

Right now there are changes the likes of which we haven't seen for 100 years, and we are the ones driving these changes together.

Xi Jinping, in his farewell to Vladimir Putin on March 22, 2023

- **Taking on the mantle from Europe's impact on de-dollarization in previous years, the BRICS, led by China, are seeking to pull the rug from beneath a dollar that is gradually losing its footing.**
- **Beijing's displacement of Washington as mediator in Saudi-Iran peace talks – combined with the scale of China's "Belt and Road" Initiative - has resulted in an increasing recognition of the Yuan's growing dominance.**
- **This dominance is evidenced by the eagerness of Saudi Arabia, Türkiye, and Egypt to join the BRICS party; however, it is not solely the BRICS that are eager to wean off their dependence on the greenback.**
- **Europe is now talking about "sovereignty" from the U.S dollar again – a narrative that stems predominantly from the mouth of President Macron, who's rousing efforts have yet to tempt Putin away from his attachment to the yuan.**
- **Putin is a Yuan man for now, however with his Ministry of Finance expressing a keen interest in a gold backed BRICS currency, and with central banks breaking gold purchases records, it's clear that the neutral reserve will play a critical role, as the transition to a "multipolar world" ensues.**

De-Dollarization Hitting the Mainstream

Wake up and smell the coffee, Mrs. Bueller!
Principal Ed Rooney, Ferris Bueller's Day Off

After several years of our covering the global push to de-dollarization in the pages of the *In Gold We Trust* report[38], the public is finally catching on. Over the past couple of months, we haven't just seen unprecedented steps to get away from the US dollar and US hegemony by the likes of China and Russia; we've also seen the topic covered in the pages of the *Financial Times* and even on Fox News and CNN. Talk about hitting the mainstream.

Just as before, we don't want to fall into the trap that Twitter experts fall into when they proclaim the imminent demise of the US dollar. We know better. In recent years we talked about *tectonic plates* shifting; and we're sticking with that picture. Tectonic plates move *very* slowly. But when they do, earthquakes happen.

In essence, the process of de-dollarization boils down to three things:

- A whole lot of complaining by politicians (and sometimes central bankers) who see themselves and their countries losing out within the current global monetary order.
- Many steps taken by these governments – some of them small, some big, some spectacular in nature – but always aimed at lowering their dependence on the US dollar, ultimately leading to less demand for US Treasuries on the margin.
- The relentless stockpiling of gold, the one true global and neutral money and another way to make yourself a bit more independent from the US dollar system.

No one should underestimate the Chinese people's determination…to defend our national sovereignty and territorial integrity. The historical task of the complete reunification of the motherland must be fulfilled…
Xi Jinping

In the past decades, the process of de-dollarization was first led by Europe, then by Russia. Today China is in the driver's seat. The last couple of months have seen a truly epic number of spectacular developments all around the world. But almost without exception, we can see a connection to China; so don't be surprised if Beijing and Xi Jinping feature heavily within the following pages. China is pushing the world towards a showdown – and region by region the world is taking notice. Asia, Africa, South America – but also the Middle East and Europe – and even the US itself.

The US Dollar Is Feeling the Heat

These are truly spectacular times. One after the other, countries are declaring their independence from the US dollar. And they are following up with actions that will shape the world we live in. Some are very active, like Russia, China and Brazil. Others at least talk the talk, like France. It's obvious to us that the world order is being rearranged before our eyes.

[38] *See* "A New International Order Emerges," *In Gold We Trust* report 2022; "De-Dollarization 2021: Europe Buys Gold, China Opens a Digital Front," *In Gold We Trust* report 2021; "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

And when you lose control
You'll reap the harvest you have sown.
Pink Floyd, Dogs

Of course, we can't immediately judge every single step and its repercussions. This would be an impossible task in the field of geoeconomics and geopolitics. Some of the seeds of de-dollarization coming to fruition today were planted years or even decades ago. It's a complicated process with many moving parts. But it's obvious that the process is in fact happening and that more and more countries see the possibility of a world order that is not solely dominated by the US dollar. Here is renowned analyst Zoltan Pozsar in a piece he wrote for the *Financial Times:*

> *"In finance, everything is about marginal flows. These matter the most for the largest marginal borrower — the US Treasury. If less trade is invoiced in US dollars and there is a dwindling recycling of dollar surpluses into traditional reserve assets such as Treasuries, the 'exorbitant privilege' that the dollar holds as the international reserve currency could be under assault."*

According to Pozsar, the process of de-dollarization can be traced back to the Global Financial Crisis of 2008. But it's easy to look back a lot farther than that.[39]

- The US snubbing John Maynard Keynes' proposal for a neutral reserve currency at Bretton Woods in 1944.
- Economist Robert Triffin warning the US Congress of the negative consequences of printing the world reserve currency in 1960.
- Europe starting to work on their own currency project back in the 1960s and 1970s, cumulating in the launch of the euro in 1999.

Of course, this list excludes the extensive countermeasures the US has taken at any point along the way. So far, the US dollar has always emerged as the winner. But times are changing, and the US is feeling the heat. We know this because Treasury Secretary Janet Yellen said as much:

> *"There is a risk when we use financial sanctions that are linked to the role of the dollar that over time it could undermine the hegemony of the dollar (…). Of course, it does create a desire on the part of China, of Russia, of Iran to find an alternative. But the dollar is used as a global currency for reasons that are not easy for other countries to find an alternative with the same properties."*

It has always been my opinion that, as the administrator of the world's reserve currency, it is not up to us [the US] to decide who can and cannot use the dollar…. I think it incentivises them [BRICS] to find alternatives.
Andy Schectman

While Yellen is certainly right that it's hard for countries to find an alternative, they certainly are trying hard. As economist Jared Bernstein, President Biden's choice to lead the Council of Economic Advisers, said in April, there is "some evidence" that China wants to weaken the role of the US dollar as the global reserve currency.

But what are the alternatives to the US dollar? The first and obvious choice is gold. In 2022 global central banks bought 1,136 tons of the yellow metal. Yes, despite reports to the contrary, gold is not a pet rock. That's the biggest gold-

[39] Please also see our extensive online-timeline of de-dollarization, ingoldwetrust.report/the-long-history-of-usdollar-dominance/?lang=en

buying spree since the 1950s. As in the years before, the main buyers have been emerging economies.

We commit to imposing restrictive measures that will prevent the Russian Central Bank from deploying its international reserves in ways that undermine the impact of our sanctions.
White House

Even within the world of paper money we do see a shift. Despite many claims that this could never happen, the renminbi has emerged as a reserve and trade currency in recent years. The sanctions the West has put on Russia and its reserves have played a big part in this process. But that's not all. Renowned Western economists like Barry Eichengreen argue that China has found new ways to establish the renminbi (yuan) as a reserve currency – without lifting capital controls and opening its capital account.

> *"We show that, contrary to conventional wisdom, lack of capital account openness may not fully prevent the Renminbi from playing a stronger role as an international and reserve currency. This is not to deny that, to overtake the US dollar as a leading international and reserve currency, China will have to further liberalise its capital account. But with the help of import financing, debt payments, payment infrastructures, currency swap lines, and offshore markets, the Renminbi can still gain a more important role".*

I think the dedollarisation trend is real… all these deniers saying "oh it'll never happen"… they're ignoring the fact that it is happening.
Lobo Tiggre

According to Stephen Jen, former "currency guru" at Morgan Stanley and now CEO at Eurizon SLJ Capital, **the US dollar is actually losing its role as the dominant reserve currency at an alarming speed**. In 2022, the year the US and Europe sanctioned Russia for starting a war against Ukraine, the US dollar's share as a global reserve currency fell at ten times the average pace of the past 20 years. Adjusting for exchange rate movements, the US dollar has lost about 11% of its market share since 2016 and double that amount since 2008. In his note Jen writes:

> *"The dollar suffered a stunning collapse in 2022 in its market share as a reserve currency, presumably due to its muscular use of sanctions (…) Exceptional actions taken by the US and its allies against Russia have startled large reserve-holding countries, most of which are from the Global South."*

Look how far you have fallen. The world's changed since your time.
Blade: Trinity, Dominic Purcell

According to Jen's own calculations, the US dollar's share of global currency reserves dropped to only 58% in 2022 – a far cry from its share of 73% in 2001 when it was the "indisputable hegemonic reserve":

> *"The prevailing view of 'nothing-to-see-here' on the US dollar as a reserve currency seems too innocuous and complacent. (…) What needs to be appreciated by investors is that, while the Global South is unable to totally avoid using the dollar, much of it has already become unwilling to do so."*

That's a view that is actually shared by IMF chief economist Gita Gopinath who does expect a further diversification of reserve assets as more countries use other currencies than the US dollar in international trade. Thus she argues:

> *"Countries tend to accumulate reserves in the currencies with which they trade with the rest of the world, and in which they borrow from the rest of the world, so you might see some slow-moving trends towards other currencies playing a bigger role."*

The United States Government is inadvertently declaring war on its own currency, weaponising the currency, using it as an instrument of US social policy… the interference of the SWIFT banking system – which is a global not an American system – is more responsible than anything else for the declining popularity of US dollars.
Rick Rule

But there is more. The use of the US dollar as a financial weapon seems to finally be bearing consequences. Reminder: The US and its allies froze around USD 300bn in Russian currency reserves and all but banned Russia from using the SWIFT payment system. Similar measures have in the past been taken against other countries, including Afghanistan, Iran, and Venezuela. Here is Zongyuan Zoe Liu, a fellow for international political economy at the Council on Foreign Relations, talking about the consequences of these actions to Reuters: "The more we use it, the more other countries are going to diversify due to geopolitical reasons".

Bank of America Analyst Michael Hartnett goes one step further and deduces that the US will have no choice but to print the difference in the face of falling demand for Treasuries: "US dollar debasement [is the] ultimate outcome as the dollar is weaponized in the new era of sanctions".

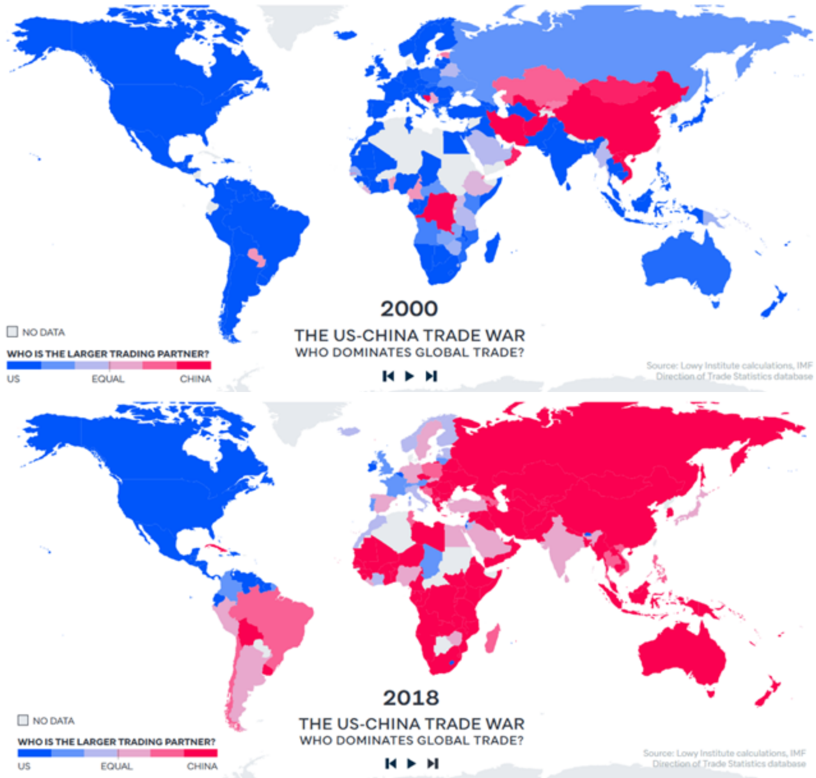
The Five Phases of De-Dollarization

Oh my God! Okay…it's happening!
Michael Scott, The Office

Now that we've established that de-dollarization *is in fact happening* and is also visibly speeding up thanks to the weaponization of the US dollar, it's time to take a breather and look at the history of and structural reasons for de-dollarization.
We identify five phases of de-dollarization:

- **2000–2009:** Growing discontent over the dominance of the US dollar in the financial system and the resulting one-sided benefits for the United States. In this phase, there are some countries that rebel, but are suppressed (Iraq, Libya).
- **2009–2013:** The attempt to reshape the Western financial system in such a way that Asia, Africa, and South America gain more say and real power. In this phase, China and its allies try to exert pressure to reform institutions like the IMF, but the United States makes only minimal concessions.
- **2013–2022:** Establishment of alternative payment systems and bilateral currency agreements that are intended to enable a departure from the US dollar as a payment and reserve currency. By now, there are various such systems, such as the Chinese SWIFT alternative CIPS. Central bank digital currencies (CBDC) also play an important role in this respect.
- **2022:** The freezing of Russian currency reserves as the first official act of the United States in an emerging currency war between the old system of the West and the new system of the East.
- **2023:** The showdown: Active resistance against the old system by the leading nations of the East, deployment of the built-up mechanisms to bypass the US dollar, and attempts to "turn" US allies (e.g., Saudi Arabia, France).

It is also helpful to look at the rise of China as a global (trade) power. This is especially helpful in understanding the position of countries and regions like Türkiye, Saudi Arabia, the whole of Africa, South America, and parts of Europe.



Source: Visual Capitalist

Too much of anything creates an imbalance in life … you never know when the winds of change strike.
Amish Tripathi

None of these countries or regions can ignore China's calls for a change of the world currency order. Many actually welcome it and are by now openly revolting against US dollar hegemony and its institutions like the International Monetary Fund.

Here are some examples from the past 12 months illustrating the global nature of this revolt:

- In January, Argentina and Brazil started working on a "common South American currency" – an idea championed by Brazil's new (and old) president, Lula da Silva. The Economist called the proposal "bizarre" – so we know it should be taken seriously.
- The same Lula shocked the world on his recent trip to China, where he stated that "every night" he asks himself why countries are forced to use the US dollar: "Why should every country have to be tied to the dollar for trade?… Who decided the dollar would be the (world's) currency?" He also heavily criticized the IMF and its practices in South America: "No bank should be asphyxiating countries' economies the way the IMF is doing now with Argentina, or the way they did with Brazil for a long time and every third-world country."
- In March 2023 the finance ministers and central bank governors of the ASEAN group met in Indonesia. Top of the agenda were discussions to reduce dependence on the US dollar, euro, yen, and British pound in financial

transactions and move to settlements in local currencies. Indonesia even urged its banks to stop issuing Western credit cards. Of the countries in Southeast Asia, only Singapore has enforced sanctions on Russia. Also, Malaysia recently revived the idea of an Asian Monetary Fund.

- In November 2022 Ghana announced plans to buy oil with gold instead of US dollars. The move is supposed to help shore up the country's currency reserves and fight local inflation. Ghanaian Vice President Mahamudu Bawumia, said that the plan "will fundamentally change our balance of payments and significantly reduce the persistent depreciation of our currency". Ghana also instructed local mines to sell at least 20% of their supply to the central bank. As of March the policy is in effect and fuel prices are dropping in Ghana, the BBC reports.
- Kenya is taking another route and has struck agreements with Saudi Arabia and the UAE to purchase oil for Kenyan shillings.

Please note, this is the *tame* stuff – the really big agreements and movements will be covered in the following chapters.

Russia and China Are Getting Ever Closer

Must I remind you, the committee, of our overwhelming superiority over NATO forces before we give it away?
General Orlov, *Octopussy*, James Bond

The images went around the world: footage of the farewell between Russian President Vladimir Putin and Xi Jinping, the President of the People's Republic of China, after the latter's visit to Moscow in March 2023. Xi uttered these memorable words: "Right now there are changes the likes of which we haven't seen for 100 years, and we are the ones driving these changes together," to which Putin only replied, "I agree". And then wished his counterpart a good trip. Perhaps this brief exchange, this shaky cell phone footage, marks the moment when the ongoing changes in the global geopolitical fabric truly struck the mainstream. A historic turning point.

The Moscow meeting was an occasion for the announcement of numerous cooperation agreements between China and Russia. These range from economic to military cooperation and mark a further, significant deepening of the relationship between the two countries. The message seems clear: Russia and China are standing together. At least for the time being. They do have a common goal: a new world order that knows more than one superpower.

In Europe and America there's a growing feeling of hysteria.
Sting, Russians

The changes Xi is talking about have been a major theme of our report for years: We call it de-dollarization – the resistance of countries like China, Russia, the rest of the BRICS, parts of Europe and the Middle East to the dominant position of the US dollar in the world financial system. In 2023, we have moved from rather passive preparations to active reorientation of the East – led by China, which has long been working toward this moment.

The special relationship between China and Russia ("Chussia") is a powerful one: a marriage of commodities and industry, uniting the largest commodity producer (Russia) and the factory of the world (China), potentially in control of Eurasia.
Zoltan Pozsar

Developments have gathered tremendous speed since Russia's invasion of Ukraine. What we are now seeing is the final showdown. It has been brought about by the multiple crises the West is facing and the increasingly blunt reactions of Western leaders. War, inflation, banking crisis. Since Western central banks seized Russian currency reserves in 2022, many governments and leaders around the world have been in a similar position to average citizens in the West facing historic levels of inflation and government intervention: **Everyone is now worried about their money.**

Putin's Worries, Putin's Plans

Oh no, not me
We never lost control
You're face to face
With the man who sold the world.
Nirvana

It is no coincidence that the largest economic and military power of its time also issues the dominant currency. But since Richard Nixon's unilateral closing of the gold window in 1971, the US dollar has been the first and only world reserve currency in history without the backing of a precious metal. This is a circumstance that has caused resentment in Europe and Asia for decades. A situation in which one nation could print the world's reserve currency at will had simply never existed before.

As we write these lines, the citizens of the West are also feeling the long-term consequences of this arrangement – in the form of high inflation rates and a teetering banking system. Theoretically, a monetary system without a peg or any other form of reference to reality may be possible, at least that is what Modern Monetary Theory (MMT) says. But reality shows something quite different. At its core, the current political and economic crisis also has to do with the fact that the monetary system has been fully coopted by politics.

And it's all your fault!
Rowley, Diary of a Wimpy Kid.

Russia's President Vladimir Putin naturally puts all blame for the currently very tense situation on the West. In a remarkable speech in the summer of 2022, Putin denounced the West's "money printing" and described the already rampant inflation as a homemade problem:

> *"Because they could not or would not devise any other recipes, the governments of the leading Western economies simply accelerated their money-printing machines. Such a simple way to make up for unprecedented budget deficits. I have already cited this figure: over the past two years, the money supply in the United States has grown by more than 38 percent. Previously, a similar rise took decades, but now it grew by 38 percent or 5.9 trillion dollars in two years. By comparison, only a few countries have a larger gross domestic product. The EU's money supply has also increased dramatically over this period. It grew by about 20 percent, or 2.5 trillion euros."*

It's difficult to understand why the Chinese or the Russians or anybody else would want to assign seigniorage – assign what Charles de Gaulle described as the exorbitant privilege of being able to print out of thin air the world's reserve currency.
Rick Rule

Unlike many Western economists and politicians, Putin sees the expansion of the money supply in the West as a serious problem. It's something that touches even Russia – even if Moscow has long tried to break away from the US dollar. Putin also directly addresses the lockup of his country's currency reserves by the West. This is the second major weakness of the current monetary system, in his eyes:

> *"According to the IMF, global currency reserves are at 7.1 trillion dollars and 2.5 trillion euros now. These reserves are devalued at an annual rate of about 8 percent. Moreover, they can be confiscated or stolen any time if the United States dislikes something in the policy of the states involved. I think this has become a very real threat for many countries that keep their gold and foreign exchange reserves in these currencies."*

The solution, in Putin's eyes: a multipolar world order, a "new world order":

> *"Changes in the global economy, finances and international relations are unfolding at an ever-growing pace and scale. There is an increasingly pronounced trend in favor of a multipolar growth model in lieu of globalization. Of course, building and shaping a new world order is no easy task. We will have to confront many challenges, risks, and factors that we can hardly predict or anticipate today."*

Russia Ditches the Euro for the Yuan

I don't know how to put this but im kind of a big deal.
Ron Burgundy, Anchorman

Shortly before the war in Ukraine started, Russia and China struck a huge deal on oil and gas supplies, the volume of which amounts to more than USD 100bn. The euro was agreed as the trading currency for the gas, which is also to come via a new pipeline. **We suspect that this was a signal to Europe to participate in the "new world order" of the East.**

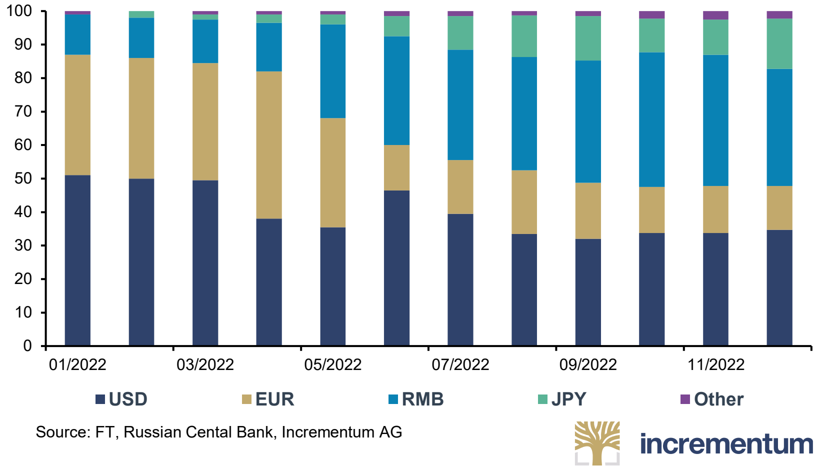
The euro was always supposed to be a neutral alternative to the US dollar. But after not only the US but also the Eurozone – including the Bundesbank, where apparently a large part of the Russian reserves is stored – reacted by blocking Russian funds, Russia also turned away from the euro. In September 2022, Russia's state-owned gas giant Gazprom switched from euros to yuan and rubles in its trade with China. Russia also now accepts yuan for oil and coal exports to China, while trade with Türkiye is now also conducted in rubles.

He loves only gold,
Only gold.
Shirley Bassey, Goldfinger

The Russian Ministry of Finance announced in February 2023 that it planned to throw the euro out of the National Prosperity Fund (NWF) – and hold only gold, Chinese yuan and rubles. According to Russian Deputy Finance Minister Vladimir Kolychev, the fund will contain up to 60% yuan and a maximum of 40% gold, with rubles possibly being added. The Russian central bank is also increasingly relying on the renminbi as a reserve currency, fulfilling a long-held goal of Beijing.

While Russia alone cannot make the yuan a globally accepted reserve currency, the support is certainly helpful. Russia and China had a combined trade volume of nearly USD 200bn in 2022. Before the war, nearly 85% of exports from Russia were denominated in Western currencies such as euros or US dollars. That share has since fallen to 16%, according to the *Financial Times* – and the renminbi's share has increased fourfold, from less than one percent in 2021.

Settlement Currency for Russian Exports, in % of Total, 01/2022-12/2022



Source: FT, Russian Cental Bank, Incrementum AG

There are known knowns, things we know that we know; and there are known unknowns, things that we know we don't know. But there are also unknown unknowns, things we do not know we don't know.
Donald Rumsfeld

We currently do not know how high the share of the Chinese currency in Russia's currency reserves really is. Even before the invasion of Ukraine, it had risen to 17% by January 2022 – but since then, the Russian central bank has not published any more data. As early as January, the yuan was also introduced as a currency on the Russian stock exchange. From January to November 2022, the trading volume of the yuan on the Moscow Exchange rose from just 0.2% of total FX transactions to 48%.

The yuan is also increasingly used in Russia's international trade, and some of Russia's largest companies have begun issuing yuan bonds to raise capital. Russian citizens are also buying yuan as more and more banks offer the possibility to open deposits in yuan. More than 50 Russian banks now offer renminbi-denominated deposits, often under names such as *Silk Way* and *Crescent Moon*. Customers are lured by higher interest rates.

Russia's largest banks are also deepening their ties to the Chinese monetary and financial system. Sberbank has started lending money in yuan to replace US dollar and euro transactions. VTB is the first Russian bank to launch money transfers to China via yuan outside the SWIFT messaging network. VTB CEO Andrei Kostin said the launch of the yuan remittance system will greatly simplify the cooperation of Russian companies and individuals with Chinese partners and increase the popularity of the yuan in Russia: "The new reality is leading to a massive rejection of the use of the dollar and the euro in international payments."

Deals work best when each side gets something it wants from the other.
Donald Trump

Russian President Vladimir Putin has recently explicitly endorsed the growing international use of the renminbi, stating during the meeting with Chinese President Xi Jinping that he supports "the use of the yuan in payments between Russia and the countries of Asia, Africa and Latin America."

Russia's Plans for Crypto

It's the pegging of commodities that will create an equal footing… if you have distributed ledger technology that shows the veracity: one country pledges oil, one country pledges grain… in a perfect world it's gold. I think gold in many respects will be the leading peg.
Andy Schectman

Russia appears to be working on several different concepts to incorporate gold and commodities more fully into a new monetary order. In doing so, they are not shying away from new types of crypto instruments such as stablecoins. Russia is currently working with several friendly countries to create clearing platforms for cross-border settlements in stablecoins. Both the Ministry of Finance and the central bank have already confirmed that cross-border trade will need to involve cryptocurrencies. Some of the ideas include the use of Bitcoin in international payments and the use of stablecoins tied to gold.

Here is what Russian Deputy Finance Minister Alexey Moiseyev had to say in September 2022:

> *"We are currently working with a number of countries to create bilateral platforms to not use dollars and euros. We are offering mutually acceptable tokenized instruments to be used on these platforms. Stablecoins can be tied to a universally accepted instrument, such as gold, whose value is clear and observable to all participants."*

Putin Wants a BRICS Currency

The BRICS may be starting a whole new currency of their own, as well as an alternate payment system to SWIFT. These are among many moves that are ultimately speeding the dollar down a path to its death.
Mark Moss

Another idea is the creation of a separate BRICS currency, which could establish itself as a global reserve currency. Such plans have been around since 2018, but they have only been actively taken up again by Moscow in particular since it turned away from the euro. Vladimir Putin wants a currency based on a basket of currencies, mirroring the concept of the IMF's special drawing rights or the ECU, the precursor of the euro.

However, it is unclear what this currency will look like and whether the other BRICS countries are really interested in these plans. The BRICS are a very heterogeneous club that could grow in terms of members and importance, but they still have little experience with such huge undertakings.

The Gold Ruble 3.0

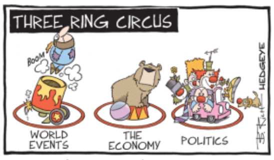
Of particular interest to this report is the *Gold Ruble 3.0* plan put forward by influential politician and former Russian Finance Minister Sergey Glazyev in late 2022.

Here is what Glazyev had to say:

> *"Gold (along with silver) has been the core of the global financial system for millennia, an equivalent, an honest measure of the value of paper money and assets. Now the gold standard is considered 'anachronistic'. It was canceled in its final form half a century ago (the United States announced the 'temporary' closure of the 'golden window' adopted in 1944 at Bretton Woods), re-pegging the dollar to oil. But the era of the petrodollar is coming to an end: now they are already talking about the petroyuan and other mechanisms to limit the abuse of the status of the world reserve currency issuer. Russia, together with its eastern and southern partners, has a unique chance to 'jump off' the sinking ship of the dollar-centric debt economy, ensuring its own development and mutual trade in the accumulated and extracted strategic resources."*

Well I guess your government will be glad to see that gold back.
Clint Eastwood, A Fistful Of Dollars

Glazyev speaks of a "Gold Ruble 3.0" because the creation of a hard ruble pegged to or backed by gold has already been tried twice. The first variant seems to be a thorn in Glazyev's side. This involved the gold standard of the 19th century, which, according to Glazyev, came about because "*Rothschild lobbied in Europe*"; and it is said to have represented a kind of subjugation of Russia to Western capitalism.



Courtesy of Hedgeye

The Gold Ruble 2.0 came after the Second World War. At that time, the Soviet Union signed the Bretton Woods treaties but never ratified them, and then tied the ruble directly to gold, as well as to "*the entire wealth of the country*". Glazyev blames Nikita Khrushchev for the end of this gold ruble. He said that Khrushchev ended the gold standard in Russia in 1961, devalued the ruble sharply, and laid the groundwork for Russia to be reduced to a "*raw material appendage*" of the Western financial system.

This is the third time; I hope good luck lies in odd numbers.
William Shakespeare

Glazyev argues that the conditions now exist for a third gold ruble. Russia could thus secure its place in the financial world and also increase the importance of its domestic gold industry. He writes:

> *"The sanctions imposed against Russia have boomeranged the Western economy. The geopolitical instability provoked by them, rising prices for energy carriers and other resources, inflation and other negative factors put strong pressure on the global economy, in particular the global financial market. In 2023, all these circumstances will objectively affect the change in the stereotypes of investment policy in the world – from risky investments in complex financial instruments to investing in traditional assets, primarily gold. According to Saxo Bank analysts, in 2023, increased demand for this metal will lead to the fact that its price will rise from the current $1,800 per ounce to $3,000. As a result, there is a real opportunity in the very near future to significantly increase gold reserves – both by increasing the physical volumes of gold and by revaluing its value."*

Glazyev is of the opinion that an expansion of gold reserves and gold mining in Russia would provide the country with a "*strong ruble*", a "*strong budget*", and a "*strong economy*". However, he makes no specific proposal to peg the ruble directly to gold. Russia has already bought massive amounts of gold for its reserves in recent years and is likely to continue doing so. In addition, there is large domestic gold production of about 350 tons per year.

A re-monetization of gold during the ongoing de-dollarization cannot be ruled out, either. The considerations are reminiscent of a simulation conducted by our advisory board member Jim Rickards at the Pentagon in 2009, as he describes it in his book *Currency Wars*.

The gold standard makes the money's purchasing power independent of the changing, ambitions and doctrines of political parties and pressure groups. This is not a defect of the gold standard; it is its main excellence.
Ludwig von Mises

In essence, Glazyev's statements are little different from those of former World Bank chief Robert Zoellick in 2010, when he proposed that governments create a new international monetary order based on a basket of currencies that would include gold. **Zoellick argued that including gold in the currency basket would boost confidence in the monetary system and serve as a hedge against inflation and provide a *reference point* for the global economy** – something it has lacked since 1971. Zoellick also suggested that central banks should make their gold holdings public to increase confidence in the international monetary system. Zoellick's proposal was seen as controversial and was ultimately not implemented in any form.

The BRICS Renaissance

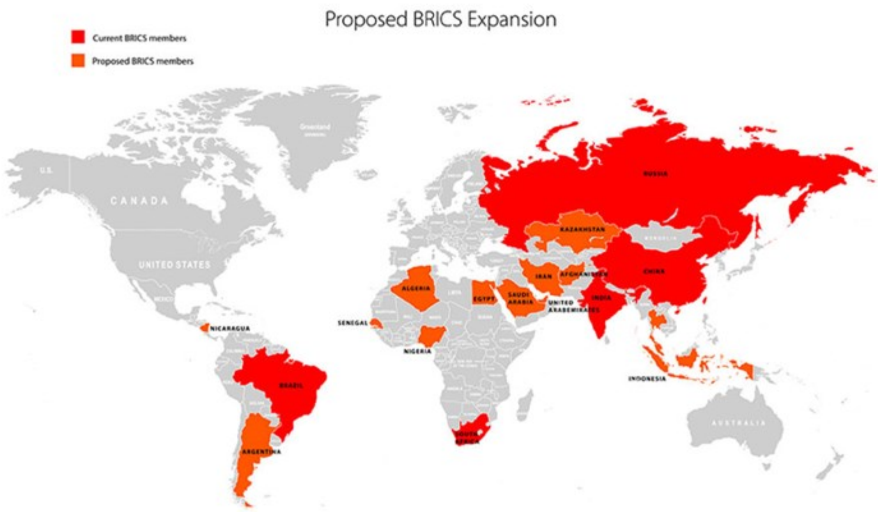
We're like one big organism, one big animal, yeah? The guys upstairs on the phone, they're the mouth. The guys down here, the hands…
David Brent, The Office

The so-called BRICS are a difficult beast to understand. The name *BRICS* is derived from the first letters of the names of these countries: Brazil, Russia, India, China, South Africa. This group designation was first proposed in 2001 by economist Jim O'Neill, then with Goldman Sachs, who recognized the economic importance of these five countries for the coming decade. To this day, however, the rumor persists that South Africa was only added to make the acronym easier to pronounce.

We have a special relationship between Russia and China, the core economies of the BRICS block and the "king" and the "queen" on the Eurasian chessboard – a new "heavenly match".
Zoltan Pozsar

The formation of the BRICS as a formal political group did not take place until 2006, when the countries decided to hold regular summit meetings. In total, the BRICS countries are now responsible for nearly 42% of the world's population and about a quarter of the world's economic output, with a large share in both categories accounted for by China, which alone contributes 70% of BRICS economic output. The first official BRICS summit was held in Russia in 2009. The 2023 summit will be held in South Africa at the end of August.

It could be the most exciting summit yet, as BRICS could grow. Saudi Arabia, Türkiye, and Egypt are planning to officially join BRICS. And according to Russia, Argentina and Iran have also begun the process of joining. Other countries that have already attended BRICS meetings as guests include Kazakhstan, Indonesia, Nigeria, Senegal, Thailand, and the United Arab Emirates. What is emerging here is a new way of organizing and governing the world – without the influence of the West.



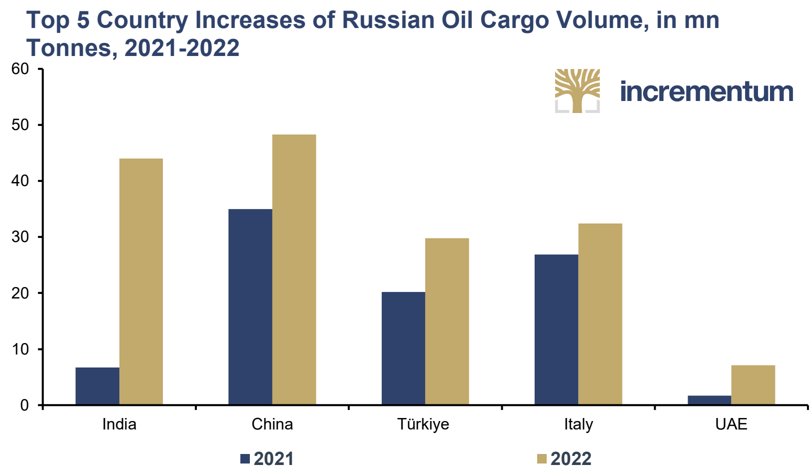
Source: Silk Road Briefing

BRICS was not created to be an instrument of defense, but to be an instrument of attack… we will have our own currency to become independent from the U.S. dollar in our trade relations.
Lula da Silva

However, the inclusion of Saudi Arabia, Türkiye, and Egypt is particularly sensitive, as all three are traditional allies of the USA. Türkiye is an important military power within NATO. And Saudi Arabia, thanks to its cooperation with Washington, has formed the basis for the petrodollar system since the 1970s. But this system seems to be finally worn out, now that China has long used its own currency in energy trading – and has found good friends in Riyadh in the meantime. Of course, **there are special blocs within the BRICS**, such as Brazil and the candidate Argentina, which are working on their own economic union and even have plans for a common currency, which, however, will only function as a unit of account for joint trade.

It's a special club. It's got history… so you have to sacrifice yourself for this club.
Patrice Evra, Manchester United

India also has a special role, since it does not have a particularly good relationship with China, and as it is closely allied with the US. The BRICS must therefore also be seen as a club in which each nation is looking for its own special advantages. For example, India, which this year brought to a close a period of more than 200 years in which China was the world's most populous country, has been able to massively expand cooperation and trade with Russia in recent years – and gets cheap raw materials, thanks to Western sanctions. Alternative currencies such as the United Arab Emirates dirham and the Russian ruble are used in this trade.



Source: VesselsValue, Incrementum AG

The Building Blocks of the BRICS World Order

We want the world and we want it.. Now!
The Doors, When The Music's Over

Alongside bilateral agreements between states, the BRICS are certainly the most important vehicle for the creation of an alternative world order – and quite specifically in the area of monetary architecture. Institutions have already been created that function as an alternative to the Bretton Woods institutions of the International Monetary Fund and the World Bank: **The BRICS Contingent Reserve Arrangement (CRA) and the New Development Bank (NDB)**. Due to China's dominance, both institutions can also be understood as building blocks of the *new world order* envisioned by Beijing.

The BRICS Reserves Fund is a financial mechanism established by the member countries of the BRICS group back in 2015. The fund was created to provide a collective pool of foreign reserves that member countries can draw on in times of economic crisis and volatility.

- The initial size of the fund was set at USD 100bn, with each member country contributing an equal share of USD 20bn. The fund is managed by a governing council consisting of representatives of the central banks of each member country. The council makes decisions on the allocation and disbursement of funds.
- An analysis on the future of the international monetary system published by the Credit Suisse Research Institute in January 2023 points to a Chinese special role within the fund:

  "Its purpose is to provide protection if member countries face external liquidity pressures. Interestingly, members are allowed to draw up to twice their paid-in capital in a situation of stress, except for China, which can only draw half of its paid-in funds. In other words, China would act as a (partial) lender of last resort within the scheme. Even if the CRA is still limited in size relative to the lending power of the IMF, its establishment is an important step toward a more multipolar system."

The New Development Bank, which was established in 2015 on India's initiative, also has over USD 100bn in capital.

- Since its founding, other countries have joined: first Uruguay, and then, in March 2023, Egypt, the UAE and Bangladesh. Its aim is to provide financing for infrastructure and sustainable development projects in developing countries.
- The NDB is headquartered in a futuristic-looking skyscraper in Shanghai, China, and has regional offices in South Africa, Russia, Brazil and India. Since late March, the NDB has been headed by someone who is well-known on the world stage: former Brazilian President Dilma Vana Rousseff.

The Rise of China and Xi Jinping

The asymmetry of the Sino-Russian relationship has been growing increasingly apparent for some time.
Ali Wyne

As we can see, China dominates the BRICS due to its sheer size and economic power. In addition, Beijing has used the past 12 months to strengthen its influence around the world. President Xi Jinping's visit to Moscow was just the tip of the iceberg – but an important tip. "Xi and Putin have the most consequential undeclared alliance in the world", ran a *Foreign Policy* cover title. The magazine called the friendship between Moscow and Beijing "more important than Washington's official alliances". Big words.

Xi Jinping's March 2023 visit to Moscow was his first overseas visit since his re-election. Despite historical tensions, the two countries have established good relations in personal, economic, military, and diplomatic terms under Xi and Putin. Economic ties between China and Russia have grown strongly since the Ukraine invasion, with China replacing the United States and Germany as Russia's main trading partner and buyer of oil and gas.

Neither Xi nor Putin make any secret of their desire to end US domination and create what Xi has called "a new model of major-country relations".

How Far Will Xi Go?

'Cause I'm only human after all,
You're only human after all.
Rag'n'Bone Man

While a process like de-dollarization is very structural in nature, must be analysed over long periods of time, and is shaped by technocratic details, one must not forget the human component. Authoritarian rulers like Vladimir Putin and Xi Jinping have certain advantages in this game, thanks to their power. So it is somewhat surprising that we in the West hear a lot about Putin's dark side but very rarely concern ourselves with the man who rules China.

As our friend Trey Reik writes in one of his recent newsletters:

> *"'We believe the greatest threats to global order emanate overwhelmingly from China's economic, military and territorial ambitions'. President Xi Jinping has been vocal about his 2049 goal for China to 'lead the world in terms of composite national strength and international influence', and he has spent the past decade consolidating his power in much the same way President Putin became Russia's supreme ruler."*[40]

Communism needs democracy like the human body needs oxygen.
Leon Trotsky

Only last October, Xi was sworn in for a third term as general secretary of the Chinese Communist Party, contrary to previous tradition. To avoid the dangerous concentration of power in the hands of a few, Deng Xiaoping had set strict limits on the terms of office of Politburo members in 1982.

These rules have now been broken by Xi. According to Trey Reik, Xi has not only elevated himself to dictator for life – he is also preparing for war.

[40] Reik, Trey: Themes, March 20, 2023

> *"President Xi shocked China experts by completely ignoring longstanding succession rules of age and experience and instead elevating six of his most ardent loyalists to join him on the Politburo. Ominously, none of the six has any job experience in economic, financial, or diplomatic affairs, and all have served in strongarm roles of anti-corruption, government reform and internal discipline. By elevating such extreme CCP loyalists to the Politburo, President Xi appears to be preparing his country for war and establishing a strict chain of command to enforce national compliance. In short, China experts now routinely refer to the new Politburo as Xi's 'war cabinet'."*

As a result, Xi was also confirmed as the country's president for the third time, taking over the authoritarian legacy of Mao Zedong. Shortly thereafter, he initiated several major reforms that massively expanded the power of the party and the state over China's economic and financial system. New party agencies were created to control the tech and financial industries, and oversight of Hong Kong and Macau was also streamlined.

I'm the man who can't be moved.
The Script

And, something that no one in the West seems to register: Xi has not only installed several loyal henchmen within the Peoples Bank of China, he has also placed a new supervisory body alongside the central bank. In addition, there is a whole series of military rearmament measures – **including the expansion of nuclear weapons numbers from 400 to more than 1500 by 2035.**

Trey Reik comments on these developments:

> *"At the risk of sounding paranoid, we find China's increasingly brazen aggressions highly troubling. Coupled with President Xi's Putin-like power grab, China's behavior represents a serious threat to global status quo, the unipolar stability of US economic and military power and even the dollar standard system itself. In such circumstances, gold's safe haven utility will prove immensely valuable."*

Xi's Appearance in Saudi Arabia

While the meeting between Xi and Putin attracted global attention, even in the mainstream media, the **Chinese ruler's visit to Saudi Arabia was probably even more important when it comes to restructuring the world's monetary architecture**. There was no lack of pompous images – and symbols pointing to a change of direction in the Middle East. This is how the New York Times reported it:

> *"Upon arrival on Wednesday, Mr. Xi was met by a grander reception than Mr. Biden received in July, when the American president visited the coastal city of Jeddah, partly in a bid to repair ties with the Saudi government. Footage of Mr. Xi's reception on Wednesday showed jets flying overhead with smoke trails in the red and yellow colors of the Chinese flag. On Thursday, he was taken to the palatial royal court, where his car, a luxury Chinese sedan, was escorted by horse riders carrying Saudi and Chinese flags. Prince*

Mohammed greeted him with a warm handshake, contrasting with Mr. Biden's greeting of a fist bump."

What are you so miserable about? There's a whole ocean of oil under our feet.
Daniel Plainview, There Will Be Blood

More than 17% of global oil exports come from Saudi Arabia. Until recently, the country was also the US's largest supplier and a crucial ally. Saudi Arabia leads the Organization of Petroleum Exporting Countries (OPEC). Since 1979, Saudi Arabia has also been an important partner of the US in the conflict with Iran.

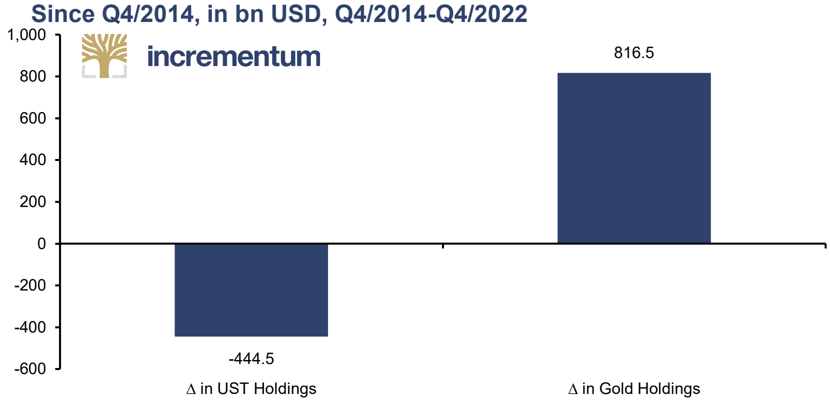
A long-secret deal from the 1970s guaranteed the US the use of the US dollar as OPEC's sole oil currency. This *petrodollar* agreement is considered the cornerstone of the post-Bretton Woods monetary order. But the petrodollar is wobbling. Much of the effort to de-dollarize consists of agreements between states to bypass the US dollar in trade for energy and goods. China has already entered into countless such bilateral agreements, but there has been no yuan-based oil trade with Saudi Arabia.

Chimerica does not work anymore and Eurussia does not work either.
Zoltan Pozsar

As a reminder, China has been signaling for many years that it is no longer happy with the US dollar as the world's reserve currency. As early as 2009 – i.e., in direct response to the Western financial crisis – the then head of China's central bank, Zhou Xiaochuan, called for a "reform of the international monetary system" and proposed replacing the US dollar with a "supranational reserve currency", as John Maynard Keynes had already suggested in 1944.

Three years later, the Chinese central bank announced that it was no longer in China's interest to expand its currency reserves. And by "currency reserves", of course, it meant the US dollar reserves that are *recycled* into US government bonds – generating demand for US debt.

Foreign Official Buying and Selling of US Treasuries and Gold Since Q4/2014, in bn USD, Q4/2014-Q4/2022



Source: FFTT LLC, US Treasury, World Gold Council, Incrementum AG

Our (U.S) politicians over the past decade or so have abused this privilege (of being the global reserve currency) as though it were there birth right. And now the rest of the world are turning their backs on the U.S dollar standard.
Mike Maloney

This announcement was made 10 years ago. And here we also find the connection to the yuan as energy currency and the meeting in Riyadh. Only a country that can buy raw materials and/or goods internationally with the money it prints itself can do without reserves. The US dollar is the reserve currency because every country must keep US dollars on hand to buy oil. But the US itself holds hardly any reserves – it just prints the US dollar, based on demand for US dollar debt abroad. That's the *exorbitant privilege* – and everyone wants it now: Europe with the euro, China with the renminbi.

China has long been using the blocking of Russia's US dollar reserves as a pretext to turn even further away from the US dollar. In January 2023, China only held US bonds worth USD 860bn – the lowest level in 14 years. This history probably explains why, after the meeting between Chinese President Xi Jinping and the King of Saudi Arabia, both countries made detailed statements – but did not address the use of the yuan as an oil currency. There was simply no need to make it explicit.

The Petroyuan Is Here

For noted analyst Zoltan Pozsar it was Xi's speech in Saudi Arabia that marked the transition from a unipolar, US-dominated world to a multipolar world order:

> *"When the world is going from unipolar to multipolar, the actions of heads of state are far more important than the actions of central banks. That is because heads of state lead, their actions affect inflation, and central banks merely follow by hiking rates to 'clean up'. Central banks will be behind the curve in this game, and if investors read only the speeches of central bankers but not statesmen, they will be even more behind the curve. The multipolar world order is being built not by G7 heads of state but by the 'G7 of the East' (the BRICS heads of state), which is a G5 really but because of 'BRICSpansion,' I took the liberty to round up."*

If you want something you've never had
You must be willing to do something you've never done.
Thomas Jefferson

Pozsar recalls that Xi's visit was the first ever summit between China and the Arab world, comparing it to the meeting of Franklin Roosevelt and Saudi King Abdul Azis Ibn Saud aboard the USS Quincy in 1945 – when the foundation was laid for the friendship between Saudi Arabia and the US, which officially continues to this day.

But what exactly did Xi say now? Here are the highlights:

> *"In the next three to five years, China is ready to work with GCC countries in the following priority areas:*
>
> *First, setting up a new paradigm of all-dimensional energy cooperation. China will continue to import large quantities of crude oil on a long-term basis from GCC countries, and purchase more LNG. We will strengthen our cooperation in the upstream sector, engineering services, as well as storage,*

transportation and refinery of oil and gas. The Shanghai Petroleum and Natural Gas Exchange platform will be fully utilized for RMB settlement in oil and gas trade. […]

The two sides could start currency swap cooperation, deepen digital currency cooperation and advance the m-CBDC Bridge project."

In order to change an existing paradigm you do not struggle to try and change the problematic model. You create a new model and make the old one obsolete.
Buckminster Fuller

Xi literally speaks of a "new paradigm". He speaks of "all-dimensional energy cooperation" and promises that China will buy large quantities of oil and gas from the Gulf states over the long term. He also promises cooperation in the "upstream sector", which is intended to fulfill the Gulf states' desire not to degenerate into mere "gas stations" but rather to keep more value creation in the country. Specifically, this involves storage, transport, and refineries.

Then Xi calls a spade a spade, saying that the Chinese Energy Exchange in Shanghai will be used and that "RMB" (renminbi) will become the settlement currency. Key point.

To quote Zoltan Pozsar: "GCC oil flowing east + Renminbi invoicing = the dawn of the Petroyuan."

It should be noted here that the deal China is offering the Gulf states is quite tempting. Because unlike the US, China does not insist on putting the yuan it issues into Chinese government bonds. Instead, in the past few years, Shanghai has set the stage for oil *and* gold trading in renminbi. So the Gulf states can either put the Chinese money into government bonds, buy goods and services from China – or simply convert it into gold.

Zoltan Pozsar: "Money is as money does, and convertibility to gold beats convertibility to dollars."

Lastly, Xi promises closer cooperation on currency swaps and talks about the prospect of using the m-CBDC bridge project. This is also enormously important, because the Chinese president tells us exactly how this new world order will be put into practice. He says quite clearly how China and the oil nations want to bypass the US dollar in the future. And – just to remove any doubt – Saudi Finance Minister Mohammed Al-Jadaan appeared before the cameras in January 2023 and said that they were open to currencies other than the US dollar.

"We enjoy a very strategic relationship with China, and we enjoy that same strategic relationship with other nations including the US, and we want to develop that with Europe and other countries who are willing and able to work with us. There are no issues with discussing how we settle our trade arrangements, whether it is in the US dollar, whether it is the euro, whether it is the Saudi riyal."

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

What is interesting, is that the m-CBDC bridge project mentioned by Xi comes from the Bank for International Settlements. Unlike the IMF, for example, the BIS is still dominated by Europe, which was also the birthplace of the euro – which once started out to challenge the US dollar. And now the BIS could play a decisive role in building a multipolar world.

Zoltan Pozsar is quite enthusiastic about the m-CBDC project:

> *"The m-CBDC Bridge project, or as the BIS likes to refer to it, Project mBridge, is a masterclass in plumbing: Undertaken by the PboC, the Bank of Thailand, the HKMA, and the Central Bank of the United Arab Emirates, the project enables real-time, peer-to-peer, cross-border, and foreign exchange transactions using CBDCs, and does so without involving the US dollar or the network of Western correspondent banks that the US dollar system runs on. Pretty interesting, no? In a very Uncle Sam-like fashion (see here), China wants more of the GCC's oil, wants to pay for it with renminbi, and wants the GCC to accept e-renminbi on the m-CBDC Bridge platform, so don't hesitate – join the mBridge fast train."*

I view the ongoing de-dollarization as a good thing for the world. I view Central Bank Digital Currency as being substantially worse than cancer.
Rick Rule

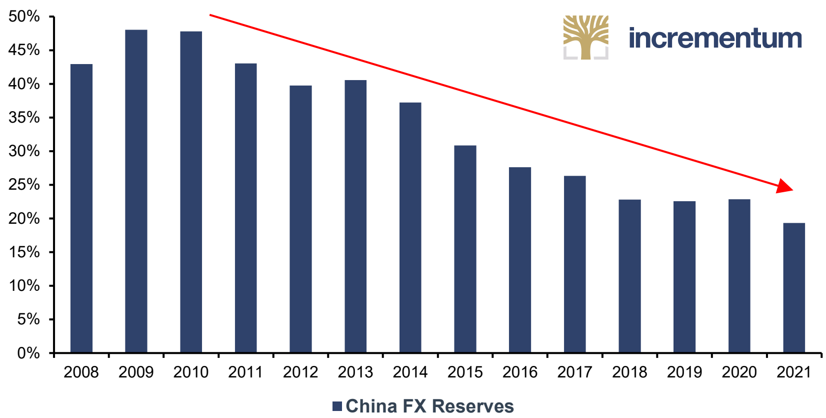
This CBDC project also brings in a new player that we have hardly known on the playing field so far: the United Arab Emirates and its currency, the dirham. Since summer 2022, Russia has accepted dirhams as payment for its energy exports. And since February 2023, Indian importers have been paying their Russian energy suppliers in dirhams.

Zoltan Pozsar elaborates:

> *"Do take a step back and consider… that since the beginning of this year, 2022, Russia has been selling oil to China for renminbi, and to India for UAE dirhams; India and the UAE are working on settling oil and gas trades in dirhams by 2023; and China is asking the GCC to 'fully' utilize Shanghai's exchanges to settle all oil and gas sales to China in renminbi by 2025. That's dusk for the petrodollar… and dawn for the petroyuan."*

Quite a few important voices in the US and the Federal Reserve are extremely skeptical about needing a digital central bank currency in the US. They talk about democracy and civil liberties – but mainly it's because the existing US dollar system works splendidly for the US. Zoltan Pozsar also strongly advises against introducing a US dollar CBDC and thereby endangering the US dollar's current supremacy.

China FX Reserves, as % of GDP, 2008-2021



Source: FFTT LLC, World Bank, Incrementum AG

Peace Is Breaking Out in the Middle East

No trouble, trouble I see
There will be peace in the valley for me.
Elvis

There have been many peace agreements and peace treaties in the Middle East – and they have often been disregarded. But this one is special. After decades of hostility, Saudi Arabia and Iran are once again talking to each other. And the mediation came from Beijing, of all places, not Washington.

The New York Times is astonished:

> *"The Americans, who have been the central actors in the Middle East for the past three-quarters of a century, almost always the ones in the room where it happened, now find themselves on the sidelines during a moment of significant change. The Chinese, who for years played only a secondary role in the region, have suddenly transformed themselves into the new power player. And the Israelis, who have been courting the Saudis against their mutual adversaries in Tehran, now wonder where it will leave them."*

How do I know that my muscles grow the way that I want? By flexing them and checking them in the mirror, by measuring them with a tape or possibly by stepping on a scale.
Arnold Schwarzenegger

Even American experts like Amy Hawthorne, deputy director for research at the Project on Middle East Democracy, admits: "This is a big deal, you have to call it that". China, she says, has taken advantage of the fact that the US has "basically no ties" with Iran. Of course, the agreement does not mean that the deep rifts between Sunnis in Saudi Arabia and Shiites in Iran have suddenly disappeared. But it is a first step, not only for the two Gulf states but also for China – which is suddenly flexing diplomatic muscle as well.

How quickly the mood in the Middle East turns is also evident in the rapprochement between Syria and Saudi Arabia. This time, Moscow is the mediator.

To this end, Kiril Sokoloff and the team at 13D write:

> *"Together, these diplomatic maneuverings are reorganizing the geopolitical map of the Middle East, and with it, the global balance of power. Washington's attempts to pressure Saudi and the UAE to isolate Iran and Syria have only served to highlight how far Beijing has been able to fill the diplomatic vacuum and to re-shape the regional power-balance in its favor. Given the level, and likely continued growth, of trade between China and the Middle East, particularly in energy, both sides have an incentive to look beyond the confines of the dollar system. Riyadh is China's largest oil supplier and Beijing is Arab countries' main bilateral trade partner, amounting to $330 billion in 2021".*[41]

Macron Discovers Europe's Interests

Never doubt the courage of the French. They were the ones who discovered that snails are edible.
Doug Larson

It's not often that a European politician causes a stir on the world stage anymore, but France's President Emmanuel Macron managed to do so in early April 2023. Surprisingly and without warning, Macron spoke of Europe as a "third superpower" after a meeting with Xi Jingping. He then warned against the "extraterritoriality of the US dollar" and insisted on his concept of the "strategic autonomy of Europe". And in a speech after his return to Europe, Macron then spoke of Europe's "sovereignty" and warned against becoming a "vassal" of the US. It was the first such outburst by a major Western head of state since the start of the war in Ukraine and the sanctions against Russia. Moreover, Macron had also stressed in the past that the path of dialogue with Moscow should remain open.

The fact that many countries accept as a principle, dollars being good as gold…leads Americans to get into debt and to get into debt for free.
Charles De Gaulle

The French president thus joins a long line of statesmen who want to free Europe from the American embrace. His predecessor Charles De Gaulle complained about the dominance of the US dollar as early as 1965. In 2018, then-EU Commission President Jean-Claude Juncker even called the euro a big step toward a "new, more sovereign Europe" and complained that Europe still transacts its energy imports in US dollars. He spoke of the "hour of European sovereignty".

However, Macron's statements were not met with approval. The US-friendly camp in Germany, in particular, immediately chastised the Frenchman and spoke of a "pipe dream". The fact that Macron returned from China not only with big plans but also with some lucrative deals for French industry should not go unmentioned. May it be a coincidence, but just a few days later, France was downgraded by Fitch. At the very least, it looks like Macron is keeping some options open for himself and Europe. And yes, getting the EU on their side would be the biggest coup imaginable for Russia and China. But there is still a long way to go before that happens.

[41] Sokoloff, Kiril: "What I learned this week", April 13, 2023

Welcome to the Multipolar World

Europe is like a bicycle. If you don't keep pedaling, you'll fall over. And if you pedal too fast, you might crash into something.
Jean-Claude Juncker

The practiced reader may have noticed that Europe plays only a small role in the chapter on de-dollarization this time, even though the euro once purported to offer a real alternative to the US dollar. The euro was chosen by China and Russia in early 2022 as the settlement currency for their huge gas deal. And the euro is the only currency that has managed to achieve significant reserve status next to the US dollar so far. **But by blocking Russia's foreign reserves, Europe has clearly aligned itself with the Western camp led by the US.**

The destruction of the North Stream pipelines (by whomever) has destroyed an important physical connection between Russia and Europe and made the EU dependent on LNG imports (from the US, for example). And then this: France, of all countries, not Iran or Venezuela, was the first trading partner to pay for LNG from China in yuan – shortly before President Macron visited Xi Jinping in Beijing. The power of the symbolism here should not be underestimated. It seems that after becoming divided over the issue of Ukraine, Europe and the East have taken a step toward each other.

The world is breaking into two distinct economic zones: the "empire of the sea", or the "Western block" of nations; and the "empire of the land", or "Eastern block". The former's currency is based on fiat money, and the latter's on the emerging tandem of commodities, gold and oil.
Charles Gave

In other words, geopolitical tectonic plates are shifting. With Britain out of the EU, it would theoretically be possible for Europe to form a *third block*, a sort of neutral-ish zone between the US and China-Russia. But it's not like Macron holds all the cards here; Washington does (for financial, geographic and military reasons). The US dollar is still the strongest and most important currency – but as we've outlined in this chapter, many countries (including at least France) are trying to gain independence. And others like Saudi Arabia and even Mexico have openly distanced themselves from the US – at least verbally.

At this point it is impossible to be sure which side Europe will really be on in this conflict between East and West in the long term. The next few years will show. It's even possible that Europe will divide itself into two blocs, as happened during the Cold War. But that is a fate Paris and Berlin surely want to avoid. France also certainly does not want to fully switch to the other bloc, but rather, as Macron said, wishes to lead a "third superpower" Europe.

World turning, mm
I gotta get my feet back on the ground.
Fleetwood Mac

Considering the provided evidence, we do not think it is any stretch to term the current setup a geopolitical showdown. While Europe is trying to find its feet, China and Russia have laid their cards on the table and are openly talking about a *new world order* that has more than one center – i.e., is multipolar.

Nowhere are the threads coming together more than in Saudi Arabia. It is a long-time ally of the US, has its currency pegged to the US dollar, and yet flirts intensively with China and the BRICS. In addition, it would like to trade with Europe in euros – i.e., it is also striving for a multipolar system. All the new constructs – the bypassing of the US dollar in trade and the growing importance of gold as a reserve – are reducing global demand for US dollars. Even Janet Yellen seems to be feeling the heat now.

Never bet against America.
Warren Buffett

The question is whether and how the USA will respond to this challenge. The US dollar is still at the top of the currency charts. Washington still has many options. And if there is one thing we know from history, it is that we should never underestimate the Americans and their pragmatism. But in purely economic and geopolitical terms, the signs point to a continuation of the trend toward de-dollarization.

This does not mean that the US dollar will disappear tomorrow – or even that it will fall. Chaos on the currency stage might even help the US dollar exchange rate in the short term. But it does mean that the will of a large part of the planet is there to find a new system. The signals are clear.

There's so many different worlds
So many different suns
And we have just one world
But we live in different ones.
Dire Straits, Brothers in Arms

Yes, world will change. "*Changes like we haven't seen in 100 years*", Xi Jinping called them. We strongly believe that the time of multipolarity has already arrived. Yes, the US dollar is top dog, but there are many other dogs in the park now. That's also why Macron is getting restless: The Euro was built for this! **Europe is still sitting on the world's largest gold reserves, while the East is stacking gold like there is no tomorrow.**

Well, maybe there isn't. At least not for the debt-driven pure fiat system that we all grew up in. We've been in this business far too long to write any obituaries for the US or the US dollar. We know that the process of tectonic plates shifting will take a long time – even if the shifting is speeding up. But we are confident of a few predictions for the coming 12 months:

- The banking crisis and inflation will be important topics in the coming US presidential election.
- Europe will try to break free from US "custody" but will have a very hard time doing so – as always. A full pivot is not to be expected – at least not under current German leadership. A sharp inflation crisis might change this.
- China, Russia, Africa, South America, and Southeast Asia will aggressively push for the establishment of alternative currency rails that bypass the US dollar, and CBDCS will play a major role. This is also why Europe is keen on a *digital euro*.
- Central banks and governments will buy ever more gold – as will the general population. The same goes for Bitcoin, with less involvement on the side of the government.
- As things stand we don't expect any coherent new, rules-based financial structure to emerge. Rather, we see the emergence of "one world, two systems" – or even "one world, three systems", if Macron really gets his will.

The era of Bretton Woods and full petrodollar dominance is now truly over.
The unipolar moment has passed.
Buckle up.

The Rise of Eastern Gold Markets: An Impending Showdown with the West

Who is the best
Who holds the aces
The East or the West
This is the crap our children are learning
But oh, oh, oh, the tide is turning.

"The Tide is Turning", Roger Waters

- **Gold flows to where it is most appreciated and to regions with buoyant economic growth and rising income levels.**
- **India and China are importing an increasingly large proportion of world gold production, and hoarding huge quantities of gold in private ownership.**
- **Asia already has sophisticated physical gold trading infrastructure led by the Shanghai Gold Exchange (SGE), and a new Moscow World Standard for gold trading has been proposed to threaten the duopoly of LBMA/COMEX.**
- **Central banks as a group have been net buyers of gold every year since 2009, and practically all of these central banks are in Asia or the non-West. In 2022, central banks bought the most gold on record, 1,136 tonnes.**
- **Pushed by rising geopolitical risk, the nonaligned countries are becoming aligned: Tectonic shifts are occurring across the global geopolitical landscape, with countries moving at record pace to embrace alliances with organizations such as the BRICS and the SCO.**
- **The countries accumulating gold through their central banks are the same countries that are lining up to join these organizations, in preparation for a possible new monetary system connected to gold.**

Introduction

A single star is rising in the east, and from afar sheds a most tremulous lustre.
Bryan Proctor

Over the last quarter of a century, there has been a huge flow of physical gold from West to East, and in parallel a huge growth in the importance of Asian gold markets.

Theory would suggest that rapid economic growth, rising income levels, and government encouragement of gold ownership across the region are behind this relentless growth in gold demand in Asia. And no doubt this is true. **But gold has also flowed to Asia because that's where it is most appreciated.**

When in 1998 Robert Mundell clarified Gresham's Law by saying that *"cheap money drives out dear, if they exchange for the same price",* he could have been talking about the flow of gold from West to East, of unbacked fiat money driving gold out of the West and into the East, and of this gold flowing to where it's most appreciated, and to where importantly, it is hoarded and treasured.

Gold is a currency. It is still, by all evidence, a premier currency, where no fiat currency, including the dollar, can match it.
Alan Greenspan

In the past, gold was universally accepted as both a currency and as a store of value because gold was correctly recognized as being both sound money and having intrinsic value. However, with the great fiat experiments of the world's central banks especially since the latter half of the twentieth century, fiat currencies - unlimited and unbacked by any physical commodity - emerged in ever increasing quantities to perform the function of currency, and in the process sought to push out and replace gold.

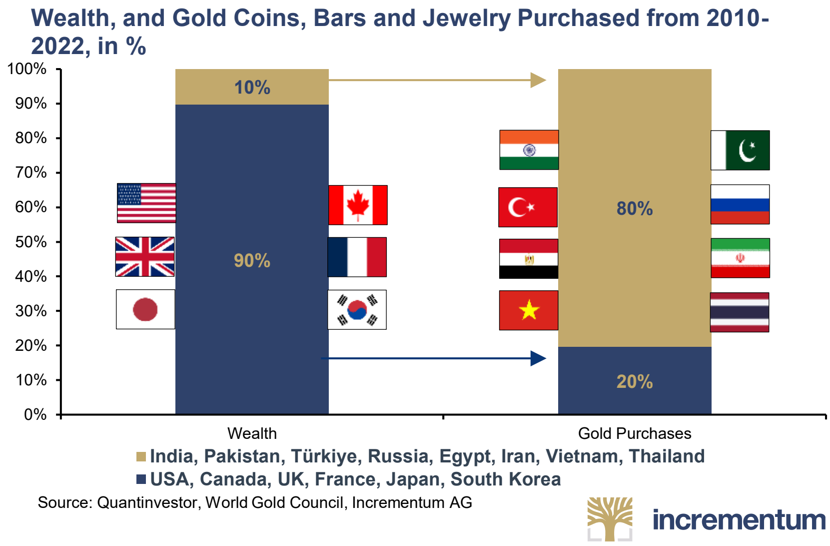
While this new paradigm was readily accepted in most parts of the West, it has not been so thoroughly embraced by the cultures of Asia and the Middle East. Asian and Middle Eastern cultures have a long-standing cultural affinity for gold, and they view gold as a symbol of wealth, as an inflation hedge, and as a safe haven asset. So when these non-Western countries experienced a rise in prosperity over the last number of decades due to rapid economic growth and rising incomes, this was naturally reflected in a desire to use this new purchasing power to accumulate real money in the form of physical gold.

Our friends at Kopernik Global Investors recently highlighted that as much as the world's economy was driven by the "developed" countries in the distant past, it is clearly being driven now by emerging markets. **Collectively, emerging markets account for:**

- 87% of the global population
- 76% of the total land area
- 44% of global GDP, up from less than 20% in 2000
- 76% of global GDP growth over the past 20 years
- 76% of global foreign exchange reserves

Back to life, back to reality
Back to the here and now, yeah.
Soul II Soul

Many in the Western world still think that the center of the gold world is in the West, particularly on the COMEX gold futures exchange in New York and in LBMA OTC trading in London. But the reality on the ground speaks of a different set of markets, of real physical gold markets all across the non-Western world, including Asia and other emerging markets, where thousands of tonnes of physical gold imports flow in each year to satisfy those regions' insatiable demand for gold. **It is these gold markets and their participants which are becoming increasingly important to the global gold markets, so it is vital to understand these markets' supply and demand mechanics.**



Now, as geopolitical risks take on new dimensions that are pushing the world's nations to rapidly align between Western and non-Western blocs, it will be crucial to understand who has the most gold, as well as if and when these blocs will move to a monetary showdown involving a new gold-backed international monetary system.

Gold Imports and Gold Stock Held

The historian of science may be tempted to exclaim that when paradigms change, the world itself changes with them.
Thomas Kuhn

Over the past few decades, as the global gold market has undergone a significant shift from West to East, one of the key drivers of this trend has been the skyrocketing demand for physical gold in Asia, particularly from India and China. This has led to huge stocks of the world's gold flowing into these countries, gold that now resides in private hands.

Given that India has little domestic gold mining activity, it has to rely entirely on gold imports to satisfy its vast gold demand. And even though China is the world's largest gold-producing nation - and has been the number one gold producer since 2008 - domestic gold mining production in China only meets a fraction of China's annual gold demand, leaving the rest to be fulfilled by gold imports.

Gold imports into India and China therefore perfectly illustrate the global shift in gold markets from West to East, as Asian nations have emerged to dominate physical gold trade flows.

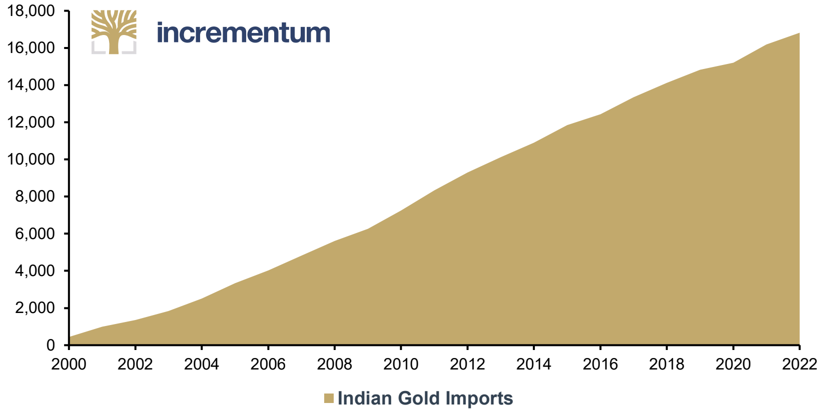
India

While Indian citizens have always been known as huge physical gold holders, their appetite for continued gold purchases appears to know no bounds.

Under the mountains is silver and gold, But under the night sky, hunger and cold.
Indian Proverb

Data from the Indian Government's Directorate General of Commercial Intelligence and Statistics (DGCIS) shows that between 2000 and 2022, India imported a staggering 16,820 tonnes of gold, from countries such as Switzerland, the UAE, and Hong Kong, and from countries across Africa. That's an average of 730 tonnes of gold per year imported into India over a 23-year period.

Indian Gold Imports since 2000 (Cumulative), in Tonnes, 2000-2022



Source: Indian Ministry of Commerce and Industry, Incrementum AG

Given that we roughly know how much gold the Indian population has held at various times in the 2000s, we can use these gold import figures to calculate how much gold the Indian population currently holds.

Temples of Tamil Nadu are secret doorways that will open up infinite human possibilities.
Indian Panorama

In 2002, Nigel Desebrock of Greedon International Research published an authoritative guide called *An Introduction to the Indian Gold Market*, in which he stated that as of 2001 there were approximately 12,000 tonnes of gold held in India. Based on DGCIS data, India imported a total of 15,825 tonnes of gold between 2002 and 2022. Therefore that 12,000 tonnes from 2001 have now become a staggering 27,825 tonnes. **And this does not even include the unknown quantities of gold held by Indian temples, which could be of extraordinary magnitudes.**

At the end of 2016, the World Gold Council estimated that total private gold holdings in India were somewhere between 23,000 and 24,000 tonnes. When we add cumulative gold imports into India of 4,385 tonnes for the six year period from 2017–2022, again based on DGCIS data, the World Gold Council's total stock of gold held in private ownership in India now becomes a range of between 27,385 and 28,385 tonnes, which perfectly aligns with the 27,825 tonnes estimate calculated above.

This however is not the full story, since DGCIS data excludes gold smuggling into India; and as everyone knows, gold smuggling is a constant and omnipresent activity due to India's high taxes on gold imports. Another arm of India's government sprawling bureaucracy, the Directorate of Revenue Intelligence (DRI), estimates in its *Smuggling in India Report 2019–2020* that gold smuggling could account for another 150–200 tonnes of gold brought into India each year. Smugglers are highly creative when it comes to hiding their contraband.

The desire of gold is not for gold. It is for the means of freedom and benefit.
Ralph Waldo Emerson

Factoring in this 150–200 tonnes for the last 20 years yield another 3,000–4,000 tonnes and boosts the total gold stock in private hands in India to a staggering 31,000–32,000 tonnes. **Astonishingly, 32,000 tonnes of gold are more than the combined gold holdings of the top 27 central bank gold holders in the world.**

Of this 31,000– 32,000 tonnes of Indian private gold, 20,000–21,000 tonnes have flowed into India during the last 20 years. **No other country, except China, comes close to the magnitude of these gold import flows.**

China

Unlike India, China is a gold mining powerhouse; and in fact, China has been the world's leading gold mining producer since 2008, when it leapfrogged ahead of the traditional big three gold producers of South Africa, Australia and the US.

This dominance in gold mining by China was made possible by the sheer growth rate of China's domestic gold mining output in this century. In the year 2000, China produced 170 tonnes of gold; however ten years later, in 2010, China was producing more than double that with an annual 345 tonnes of gold output.

Sturdy grass withstands high winds; genuine gold stands the test of fire.
Xi Jinping

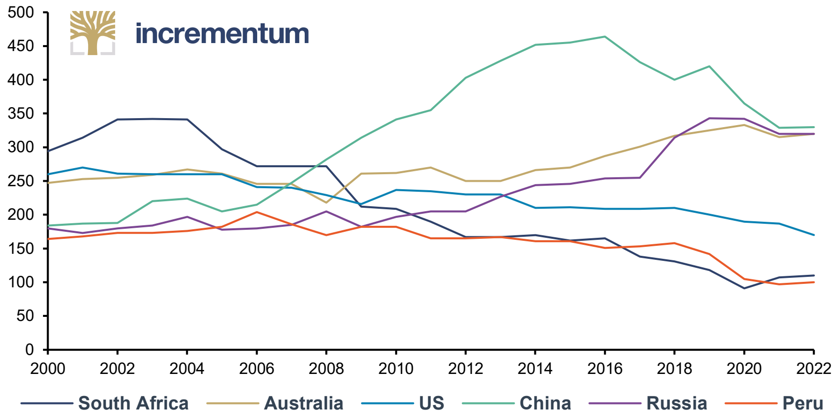
China's gold output then continued to increase dramatically over the subsequent five years; and by 2015, Chinese gold production peaked with annual output of 450 tonnes. Production then remained above the 400 tonnes level each year for a number of years, before falling slightly in 2019. Despite that drop, China has still remained as the world's number one gold producer every year since then.

Also notable is that Russia's gold production has experienced enormous growth in the last two decades, a growth which has allowed Russia to climb the rankings to now become the second largest gold producing country in the world. From not even being in the top 5 gold producers in the 1990s, Russia, like China has seemingly come out of nowhere, becoming the 5th largest gold producer in the 2000s, the 4th largest in in 2009, the 3rd largest in 2014 (when it bypassed the US), and the 2nd largest in 2018, when Russia topped Australia.

All creation is a mine, and every man a miner.
Abraham Lincoln

We are now witnessing an era where China and Russia are the world's two leading gold mining producers, ahead of Australia, the US and South Africa.

Annual Gold Mining Production, in Tonnes, 2000-2022



Source: Refinitiv, Incrementum AG

China is a big country, inhabited by many Chinese.
Charles De Gaulle

Even given these impressive annual gold mining output figures, the sheer size of China's annual gold demand since the early 2000s has been far in excess of domestic gold production levels, necessitating that the gap be filled by gold imports. These gold imports come chiefly from countries such as Switzerland, Hong Kong, Australia, and South Africa.

While individual-country gold flows into China can be examined and collated in an attempt to gauge how much gold is entering China, a much simpler way to estimate China's annual gold imports is to look at the look at the Shanghai Gold Exchange (SGE) since the SGE allocates gold for the entire Chinese gold market.

On the supply side, due to cross border trade rules, all gold imported into China is required to be channeled through the SGE. In addition, due to VAT rules and incentives, where high-purity gold is exempt from VAT when traded on the SGE, most of the remaining Chinese gold supply, from domestic production and recycled gold, also flows through the SGE.

On the demand side, the SGE supplies gold to the entire Chinese market, so physical gold withdrawals from the SGE are a suitable proxy for Chinese wholesale gold demand (consumer demand and institutional demand). We can therefore estimate Chinese gold imports without looking at import trade statistics, but rather by taking SGE gold withdrawals and subtracting domestic gold production.

Asia's attraction to gold has been driven by two main factors: traditions, which have ensured gold plays a major role in peoples' lives, and the lack of alternative forms of investment.
LBMA

Between 2002 and 2022, SGE gold withdrawals totaled an enormous 25,800 tonnes. During that period, Chinese domestic gold production totaled 7,400 tonnes. The difference, which is an approximation of Chinese gold imports over the twenty-year period, is 18,400 tonnes. Note that for the same period, the WGC estimates that China imported a total of 17,270 tonnes of gold. So, the approximation is not dissimilar to WGC data.

The key takeaway is that China, like India, has imported a huge amount of gold since the early 2000s; and in China's case this has been despite China also being the world's largest gold mining producer. **Together, India and China have officially imported somewhere in the region of 34,000–36,000 tonnes of gold over the last 20 years.**

With annual gold imports by both China and India growing rapidly since the early 2000s, these two markets have over time imported an increasingly large amount of the world's annual gold production, especially when we exclude China's domestic production.

It is much better to have your gold in the hand than in the heart.
Thomas Fuller

There are also many other Asian markets that have imported increasing quantities of gold since the 2000s, including Türkiye (over 5,400 tonnes imported since 2000), Vietnam (1,200 tonnes), Hong Kong (9,700 tonnes, a lot of which gets re-exported to China), Singapore (2,700 tonnes), and Malaysia (1,700 tonnes). **The list goes on and on. And as you can see, this trend is right across Asia.**

Consumer Gold Demand – 2000 vs. 2022

The following table shows consumer gold demand in the years 2000 and 2022 for selected countries and regions across the world, measured in tonnes. **Comparing the demand figures of 2000 with 2022 reveals some interesting trends, with Asian gold markets growing, at the expense of the West.**

Consumer Demand for Gold – 2000 vs. 2022

	2000	% of Global Demand	2022	% of Global Demand	2022 vs. 2000 in Tonnes	2022 vs. 2000 in %
India	723.0	20.4%	774.0	23.4%	50.0	7.0%
China	292.6	8.3%	824.9	25%	532.3	181.9%
Japan	105.1	3.0%	4.3	0.1%	-100.8	-95.9%
Middle East	457.9	12.9%	268.2	8.1%	-189.7	-41.4%
Türkiye	177.4	5.0%	121.5	3.7%	-55.9	-31.5%
United States	368.5	10.4%	256.6	7.8%	-111.9	-30.4%
France	19.0	0.5%	19.9	0.6%	0.9	4.5%
Germany	15.6	0.4%	196.4	5.9%	180.8	1,159%
Italy	92.1	2.6%	17.8	0.5%	-74.3	-80.6%
UK	75.0	2.1%	35.6	1.1%	-39.4	-52.5%
Rest of Europe (without CIS)	142.4	4.0%	115.1	3.5%	-27.3	-19.2%
Other	1,076.0	30.4%	669.1	20.3%	-406.9	-37.8%
Global Demand	3,544.6	100.0%	3,303.3	100.0%	-241.3	-6.8%

Source: World Gold Council, Incrementum AG

From the table, the most striking development is the huge absolute growth in Chinese consumer gold demand over the period, which rose by 532 tonnes, from 292.6 tonnes in 2000 to 824.9 tonnes in 2022. That's an increase of 181%. India has also seen its annual consumer gold demand rise since the turn of the millennium, albeit from an already high base in the year 2000.

Together, China and India have gone from representing a combined 28.7% of consumer gold demand in 2000, to now driving nearly half (48.4%) of global consumer demand in 2022, with a combined 1,600 tonnes of demand last year.

Social structures, types and attitudes are coins that do not readily melt. Once they are formed they persist, possibly for centuries.
Joseph Schumpeter

In the Western world, only physical-gold stronghold Germany has been an outlier among Western countries, with German consumer gold demand rising an astonishing 1,200% between 2000 and 2022. But factor out Germany, and consumer gold demand in the rest of the West (the US and the rest of Europe) fell dramatically between 2000 and 2022, down 140 tonnes, or 43%, from 328 tonnes to 188 tonnes. This has been primarily due to a contraction of consumer gold demand in the US, and also in Italy and the UK.

These trends are testament to the fact that gold has flowed to where it is most appreciated and to where economic prosperity and savings rates have risen, i.e. gold has flown out of the West and into the East.

Asian Gold Trading Infrastructure

Shanghai Gold Exchange

To gauge the enormous growth of the Chinese gold market since the early 2000s, it's instructive to look at the Shanghai Gold Exchange (SGE), which is the world's largest physical gold exchange, and the epicenter of the Chinese gold market.

SGE is primarily a physical gold exchange, where physically delivered gold contracts trade and settle via the delivery of gold bullion between sellers and buyers, and this bullion can then be withdrawn from the SGE's nationwide network of certified vaults. Kilobars dominate gold trading in not only China but all across Asia including in India and Hong Kong. SGE settlement is therefore predominantly in terms of gold kilobars.

Pure gold always furbish after test.
Kewal Singh

For example, the flagship and highest trading volume contract of the SGE is the Au99.99 contract, which is a physically delivered spot contract for 1 kg gold ingots of 99.99% purity or higher. While kilobars dominate the SGE, there are other SGE spot gold contracts which settle with delivery of gold ingots in 3 kg, 12.5 kg and 0.1 kg weights (all of purity 99.95% or higher).

There are also international versions of the 1 kg, 0.1 kg, and 12.5 kg contracts, which trade on the SGE International Board. In addition, the SGE also trades non-spot gold contracts for deferred delivery (a range of future delivery dates) – but still the delivery is of physical gold.

When the SGE was launched in October 2002 by the People's Bank of China (PBoC) and Chinese government, its main objectives were to provide a centralized platform for gold trading in China and to promote the development of the country's gold market. Over time these objectives expanded to include boosting the Exchange's international influence, promoting the use of the Chinese renminbi in international gold trading, and increasing the influence of SGE pricing on international gold price discovery.

China is building the infrastructure for renminbi internationalization. The petro-yuan system could allow Beijing to accelerate the process while retaining full control of its capital account.
Chi Lo

In 2014, the SGE launched its *International Board*, a.k.a. the Shanghai International Gold Exchange (SGEI), so as to internationalize China's gold market, by offering "international" members access to renminbi gold trading on the SGE and use of the International Board precious metals vault located in the Shanghai Free Trade Zone (FTZ). The International Board now has 93 members.

In 2016, the SGE also launched its own twice daily gold fixing, called the Shanghai Gold Benchmark Price auction, which was the world's first renminbi-denominated benchmark gold price auction. The auction aims to establish a benchmark price at which supply and demand are in balance. Trading and settlement in the auction are for 1 kilogram lots of 99.99% purity gold or higher. Commenting on the launch of the Shanghai Gold Benchmark Price on April 19, 2016, Jiao Jinpu, chairman of the SBU, is reported to have said:

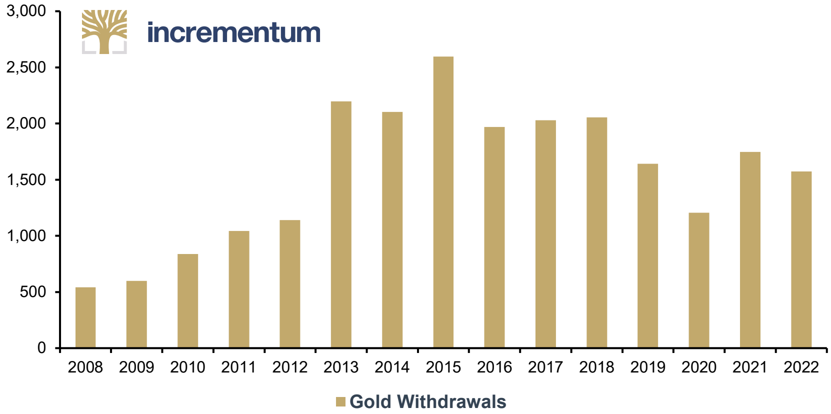
> *"The launch of the 'Shanghai Gold' pricing mechanism is another landmark event in the international development of China's gold market. … The transformations from focusing on commodity attributes to focusing on commodities and financial attributes, and from focusing on domestic markets to focusing on both domestic and international markets will promote the formation of a multi-level and more open Chinese gold market system."* (our translation)

This internationalization has also given the Chinese gold market more representation and influence in global bodies such as the London Bullion Market Association (LBMA). In February 2009, there were six Chinese refineries on the LBMA Good Delivery List for gold. Now there are thirteen. In February 2009, there was only one ordinary (full) member of the LBMA from China, namely the Bank of China. Now there are seven full members from China, all banks, including ICBC, Bank of Communications, and China Construction Bank.

Without continual growth and progress, such words as improvement, achievement, and success have no meaning.
Benjamin Franklin

While the SGE was established over twenty years ago in 2002, it was in 2007 that SGE physical gold withdrawals began to equal Chinese wholesale gold demand. This milestone indicated that by 2007 the SGE had begun to fulfill its gold allocation role for the entire Chinese gold market. Now with virtually all gold supply in China coming in through the SGE, nearly all Chinese gold demand has to be met by gold withdrawals from the SGE vaults. Thus, SGE gold withdrawals are a suitable proxy for Chinese wholesale gold demand. **One can therefore see the massive growth in the Chinese gold market by merely looking at SGE annual physical gold withdrawals.**

Shanghai Gold Exchange (SGE) Gold Withdrawals, in Tonnes, 2008-2022



Source: SGE, Incrementum AG

India International Bullion Exchange (IIBX)

While India has a highly developed OTC gold trading market, and an established trading infrastructure of 1 kg gold futures contracts on the Multi Commodity Exchange of India Limited (MCX), the country's gold trading mechanisms saw a new entrant in July 2022, with the launch of the Indian government-backed India International Bullion Exchange (IIBX).

IIBX will provide an efficient price discovery for bullion… and is on the threshold of becoming the gateway to India's bullion imports.
Narendra Modi

IIBX, which offering trading of spot gold contracts backed by physical gold, is located in a special economic zone in GIFT City in the Indian state of Gujarat, and the gold backing the contracts is stored in gold vaults in GIFT City. **One aim of IIBX is to facilitate qualified buyers to import gold directly into India without using banks or authorized agencies.**

Although trading volumes so far have been minimal, if trading gains traction, it should go some way towards improving gold price transparency in India. Whether it will also create gold price discovery that will influence the international gold price remains to be seen.

Russian gold market infrastructure

The creation of a new gold standard in the future is capable of destroying London's monopoly on pricing in the precious metals market, but for this Russia needs to enlist the support of all the EAEU countries, as well as the authorities of China and India.
Dmitry Golubovsky, Analyst, "Golden Mint"

It has become increasingly apparent that Western sanctions against Russia have accelerated the increasing array of alliances and convergences between Moscow and its Asian allies in China and beyond, not least in the gold market.

In late February 2022, as the West agreed upon sanctions as an immediate reaction to Russia's invasion of Ukraine, the LBMA expelled three Russian banks from its membership: VTB, Sovcombank and Otkritie. Days later the LBMA suspended all six Russian precious metals refineries from the LBMA Good Delivery List; and the CME Group followed suit, suspending these same six Russian refiners from the COMEX-approved refiner list.

After Russia's reserves in dollars, euro, pound, and yen were 'frozen,' it is unlikely that any sovereign country will continue accumulating reserves in these currencies. Their immediate replacement is national currencies and gold.
Sergey Glazyev

Less than six months later in July 2022, news emerged that Moscow and its Eurasian Economic Community (EAEU) allies were proposing the creation of a new precious metals trading and pricing infrastructure independent of the LBMA and COMEX, with the objective of breaking London's and New York's monopoly over global precious metals pricing. This proposal calls for:

- a Moscow World Standard (MWS) for precious metals trading, similar to the LBMA's Good Delivery List
- a new international precious metals exchange in Moscow based on the MWS, called the Moscow International Precious Metals Exchange
- new precious metals price fixings based on the MWS, so as to generate gold price discovery and reference prices independent from the LBMA and COMEX

This new proposed Moscow World Standard gold exchange is distinct from the gold trading that currently takes place on the precious metals market of the Moscow Exchange. According to a letter by the Russian Ministry of Finance:

> *"It is necessary to make membership in this organization attractive to all, without exception, foreign participants in the precious metals market, especially China, India, Venezuela, Peru, and other countries of South America and Africa… The creation of such a structure will be able to destroy the LBMA monopoly in the shortest possible time and create a powerful international association of participants in the precious metals industry and ensure the stable development of the industry both in Russia and around the world."*

For the last quarter of a century, there has been a flow of gold from West to East through the main hubs (London, Switzerland, Türkiye, UAE, etc.), with a capacity of 2000–3000 tons per year. Has the "despicable metal" remained in the vaults of Western Central Banks, or has it all been "demonetized" through swaps and leasing? The West will never say that, and there will be no audit of Fort Knox.
Sergey Glazyev and Dmitry Mityaev

The proposal for a Moscow World Standard and a new precious metals exchange emerged following a meeting of finance ministries, central banks, exchanges, and gold producers of Eurasian Economic Union (EAEU) member states, after which the proposal was distributed to all financial market participants in each EAEU state.

The mastermind of the proposal was Sergey Glazyev, who is Minister for Integration and Macroeconomics of the Eurasian Economic Commission (EEC) - the EAEU's executive body. Glazyev is very close to Putin and was an advisor to the president of the Russian Federation between 2012 and 2019. He is also a former deputy in the Russian State Duma and a former minister of Foreign Economic Relations of the Russian Federation.

Five months after Sergey Glazyev introduced proposals concerning a Moscow World Standard for gold, he updated his ideas in an article published on the Russian news site Vedomosti during the last week of 2022.

In the article titled "*Russian Ruble 3.0 - How Russia can change the infrastructure of foreign trade*", Glazyev and co-author Dmitry Mityaev highlight the gravitation of Russia's trade towards *friendly countries*, the presence of many trade surpluses with these countries (in yuan, rupees, rial, etc.), and the need to minimize possible exchange-rate and sanctions risks on these surplus balances.

Critically, their bombshell proposal to do so, which has been under-reported in Western media, is to "*buy non-sanctioned gold in China, UAE, Türkiye, possibly Iran and other countries for local currencies*".

Cooperation between the Chinese and Russian gold markets

China and Russia are already working closely on interconnecting their gold markets via collaboration between the Shanghai Gold Exchange and Russia's financial authority, the Self-Regulatory Organization 'National Financial Association' (SFO NRA). SFO NRA is a Russian professional body representing the entire Russian financial sector, including the Russian precious metals market.

Consolidating and developing China-Russia relations is a strategic choice made by China based on its own fundamental interests.
Xi comment to Putin

In November 2020, the SGE and Russia's SFO NRA signed a memorandum of understanding (MoU) in a live ceremony, by which the countries aim to open a new era of Sino-Russian gold market cooperation, via promoting the development of both markets and facilitating Russian institutions to access China's gold market. This MoU was followed by a China-Russia precious metals webinar in June 2021, hosted by the SGE. In the press release, the SGE stated that

> *"[the] two parties will continue to work to establish a communication platform for investors in the two countries, and promote a win-win situation through cooperation, so as to promote the healthy development of the two countries' gold markets in the post-pandemic period."*

The US and Europe, by imposing sanctions on Russia, they are at the same time shooting themselves in the foot.
Iskander Lutsko

Because of the Western sanctions now targeting Russian gold exports, gold exports to China have already ramped up since mid-2022. With three Russian banks – VTB, Sberbank and Otkritie – already members of the SGE International Board, this cooperation between the gold markets of Russia and China looks set to intensify. This sentiment is echoed in the Russian SFO NFA Facebook account's comments:

> *"Russia and China play an essential role in the global gold market as the leading gold producing countries. In this regard, in 2018, the SRO NFA and Shanghai Gold Exchange reached an agreement on the beginning of cooperation, which is now officially enshrined in the Memorandum [MoU]...The purpose of the MOU is to exchange accumulated knowledge and experience to facilitate connectivity and mutual development of the Russian and Chinese precious metals markets."*

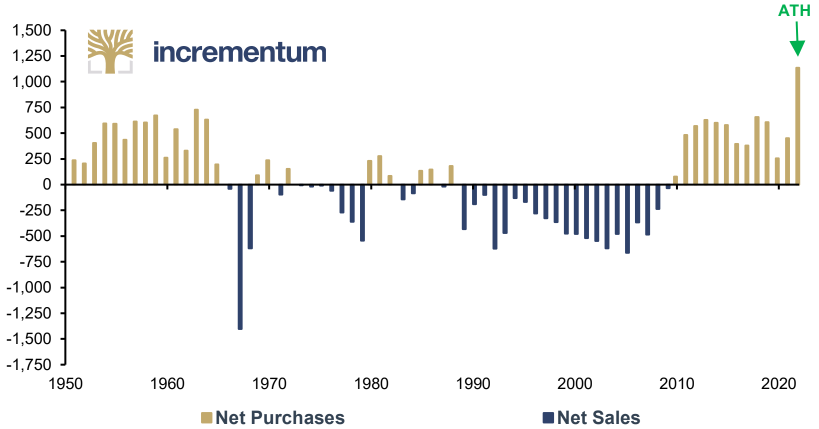
Central Bank Monetary Gold Buying

A monopoly is like running on firm ground. Nothing compels you to move, but if you do, you move forward.
Raghuram Rajan

When looking at the shift in the global gold market from West to East, one segment which arguably gets more attention than any other is the central bank gold market. Over the last 15 years, non-Western central banks, mostly but not exclusively in Asia and mostly but not exclusively emerging market nations, have literally monopolized central bank gold buying and become increasingly important players in the sector.

For many years from the early 1990s, Western central banks dominated the central bank gold market, and their transactions, mostly sales from their huge stockpiles, had a significant impact on sentiment. In the 1990s, this included significant gold sales by countries such as Australia, Canada, the UK, Belgium and the Netherlands; and in the 2000s further huge gold sales were undertaken within the framework of a series of Central Bank Gold Agreements (CBGAs), including gold sales by Spain, France, Switzerland, Austria, the Netherlands, and the ECB.

Global Central Bank Gold Purchases, in Tonnes, 1950-2022



Source: World Gold Council, Incrementum AG

Pivot 2009, and net buyers 2010–2022

Despite disparagement of gold by academics and central bankers, gold has never fully lost its place as the bedrock of global finance.
James Rickards

Then, in 2009, a critical pivot occurred, when, for the first time in 20 years, central banks as a group turned from being net sellers to being net buyers of gold. While this pivot was partially triggered by the Global Financial Crisis and the ensuing deep recession of 2007–2009 as central banks moved to diversify their foreign exchange reserves, the shift was also supported by the growing economic and geopolitical influence of Asian powers such as China and Russia. **It was also a pivot which signaled the beginning of a new multi-year trend of central banks being sizeable and continuous net buyers of gold.**

Gold is still considered to be one of the world's safest assets, whose characteristics can be attributed to gold's unique properties such as finite supply of physical gold, and lack of credit and counterparty risk, given that gold is not a claim against a specific partner or country.
Hungarian Central Bank

The year 2009 was also the year in which China threw down the gauntlet by announcing an addition of 454 tonnes of gold to its reserves, i.e. gold which had been accumulated over the previous 6 years, and in which India bought 200 tonnes of gold from the IMF in one off-market transaction.

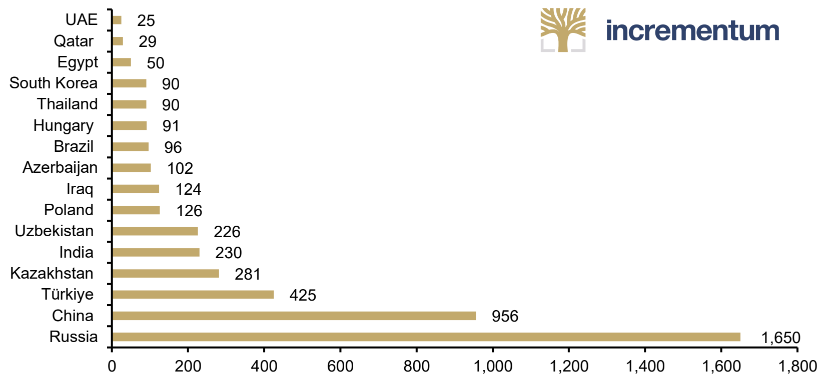
According to the WGC, between 2010 and 2022, central banks and other official financial institutions added a cumulative 6,800 tonnes of gold and were net buyers of gold every single year over this timeframe. Of this total, 4,984 tonnes of gold purchases have been reported, either directly by the central banks or via the IMF's International Financial Statistics (IFS) database and can be attributed to buying by specific countries.

The largest 'reported' central bank gold buyers over this 2010-2022 period were the Russian Federation (1,650 tonnes), China (956 tonnes), Türkiye (425 tonnes), Kazakhstan (281 tonnes), India (230 tonnes), and Uzbekistan (226 tonnes).

But the list of gold buyers goes on and on: Poland (126 tonnes), Iraq (124 tonnes), Azerbaijan – State Oil Fund SOFAZ (102 tonnes), Brazil (96 tonnes), Hungary (91 tonnes), Thailand (90 tonnes), Korea (90 tonnes), Qatar (79 tonnes), United Arab Emirates (75 tonnes), and Egypt (50 tonnes).

The above 16 countries collectively bought a staggering 4,700 tonnes of gold over that 2010–2022 period. Apart from Poland and Hungary, all of these central banks are located within Asia or the Middle East or else have an affiliation – like Brazil – to institutions where the majority of countries represented are Asian countries.

Largest (Reported) Gold Buyers, in Tonnes, 2010-2022



Source: World Gold Council, Incrementum AG

2022 – Record Year for Central Bank Gold Buying

If records refuse to be broken, shatter them.
Matshona Dhliwayo

Indeed, the central bank gold buying trend is still accelerating, since according to WGC data, 2022 was a record year, with central banks buying a combined 1,136 tonnes of gold. Of this total, 862 tonnes or over 75% occurred in the second half of the year, and a majority, over 655 tonnes, was "a substantial estimate for unreported buying".

For example, of the 445 tonnes of gold said to have been bought by central banks in Q3/2022, nearly 300 tonnes of this were 'unreported'. In Q4/2022, the trend was similar, with over 270 tonnes of Q4 central bank gold buying not attributable to reported purchases.

If I put myself in a Chinese government official's shoes and observe what happened to Russian FX reserves, the next move is pretty simple.
Kevin Muir

While the reported purchases are sourced from central bank reports and the IMF's IFS database, the unreported buying is confidential information sourced by the WGC and its data consultant Metals Focus. Although we cannot by definition verify which central banks represent the unreported buying during 2022, **much of this was likely to have been by emerging market central banks, and some of it would have involved China and Russia.**

What is apparent, though, is that the 'reported buying' by central banks during 2022 was predominantly from Asia and the Middle East (including Türkiye). Central bank gold buying across the Middle East was particularly buoyant in 2022, with Türkiye adding a huge 147.3 tonnes, Egypt 44.7 tonnes, Iraq 33.9 tonnes, Qatar 35 tonnes, and the United Arab Emirates 19.5 tonnes.

As well as Russia, Central Asia was represented by Uzbekistan, which added 34 tonnes. In South Asia, the Reserve Bank of India bought 33.3 tonnes of gold during 2022. In East Asia, the Central Bank of Mongolia says it accumulated 22.9 tonnes of gold in 2022.

The change in gold holdings is a result of the continuous and ongoing efforts by MAS to ensure that the official foreign reserves (OFR) portfolio remains well-diversified and resilient through economic and market conditions.
MAS

Not surprisingly, the trend of 2022 has continued into 2023, with Singapore's central bank, the Monetary Authority of Singapore (MAS), revealing that it returned to substantial gold buying for the second time in two years with the announcement of a combined 68.6 tonnes of gold buying over January, February, and March 2023. These early 2023 purchases followed an earlier bout of gold purchases by MAS of 26 tonnes over the period May and June 2021. The combined purchases of 95 tonnes of gold by MAS from May 2021 to March 2023 have together boosted Singapore's gold reserves by 75% in less than two years. MAS now holds 222.4 tonnes of gold.

Interestingly, prior to May-June 2021, Singapore had held 127.42 tonnes of gold and had not bought any gold for many years, so the country's return to gold buying is notable in that one of the most sophisticated central banks in Asia is returning to gold buying after many years of sitting on the sidelines.

Leaving the largest until last, central bank heavyweights China and Russia have also recently returned to the gold market with a bang and have now begun to announce monthly gold buying again. And in both cases the strategic timing of the announcements and their geopolitical importance cannot be understated.

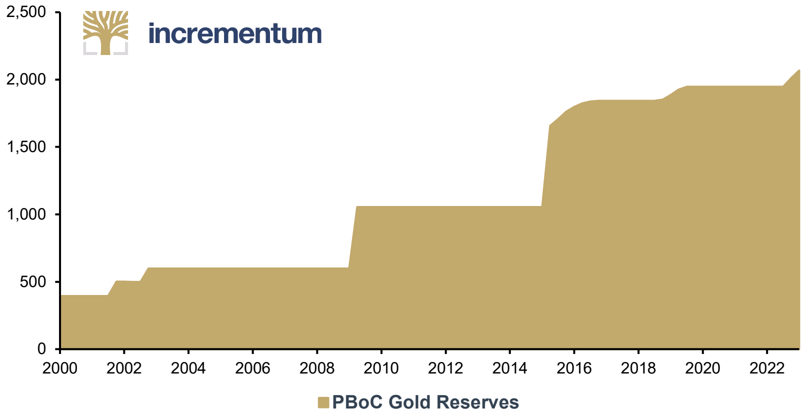
China recommences gold buying announcements

In December 2022, China surprised the global gold market when it announced that during November 2022, the People's Bank of China had purchased 32 tonnes of gold. Surprising, because before November 2022 it had been 37 months, or more than a 3-year hiatus, since the PBoC had officially last added to its gold reserves, in September 2019.

We're confident that central banks will continue to build their official gold holdings.
Louise Street

These monthly gold buying announcements by China have continued for another five months now, with China's State Administration of Foreign Exchange (SAFE), which publishes China's official reserve asset data, announcing on a monthly basis that between December 2022 and April 2023, the PBoC added another 96 tonnes of gold –That's a very substantial 128 tonnes of gold added to China's monetary gold reserves over just a six-month period between November 2022 and April 2023. **The PBoC's gold reserves now *officially* stand at 2,076 tonnes.**

PBoC Gold Reserves, in Tonnes, Q1/2000-Q1/2023



Source: World Gold Council, Incrementum AG

Russia recommences gold buying updates

Bank of Russia assets in precious metals are managed separately from foreign exchange assets. Bank of Russia gold assets comprise monetary gold, stored at vaults within the territory of the Russian Federation.
Bank of Russia

Towards the end of March 2023, the Russian central bank also returned to announcing its gold holdings, following a one-year hiatus, and revealed that in the one-year period between February 2022 and February 2023, it had officially accumulated another 1 million ounces of gold, or 31 tonnes, thereby taking Russia's total gold holdings to 2,330 tonnes.

This one-year pause had begun in February 2022, following Russia's invasion of Ukraine and the West's move to freeze Russia's US dollar and euro FX reserves, at which point Russia decided to halt publication of its international reserves data, including for gold. That created a shroud of secrecy as to whether Russia was continuing to add to its monetary gold reserves. Now this shroud has been lifted.

Strategic timing of Chinese and Russian gold updates

***Xi:** Change is coming that hasn't happened in 100 years, and we are driving this change together.*
***Putin:** I agree.*

The dates on which both China and Russia restarted monthly updates to their monetary gold reserves have huge strategic and geopolitical significance, since they both coincided with geopolitical dialogs involving China and its global allies. Similar to China's previous multi-month gold buying announcements in 2015 and 2018, which coincided with or preceded important economic or monetary events (i.e. China's desire in 2015 for the yuan to be added to the IMF's SDR, and the Chinese-US trade war of 2018-2019, respectively), China's latest monthly gold buying announcements recommenced on the very day, December 7, 2022, that Xi Jinping began a visit to the world's largest oil exporter, Saudi Arabia, to attend meetings with Gulf Arab states and Arab leaders, meetings which were described by Chinese foreign ministry spokeswoman Mao Ning as "an epoch-making milestone in the history of the development of China-Arab relations".

A few months later, Chinese Premier Xi Jinping was back in the picture, with the Bank of Russia commencing publication of its gold holdings less than 24 hours after Xi Jinping met with Russia's Putin in Moscow on March 21, during which they signed an agreement on a new era of cooperation between China and Russia.

We signed a statement on deepening the strategic partnership and bilateral ties, which are entering a new era.
Xi Jinping

The timing of both China's and Russia's new gold buying announcements following meetings between Xi and the Arab world, and Xi and Putin, respectively, are surely signals that these new-era strategic partnerships will undoubtedly include gold as a component of future monetary arrangements.

As to how much sovereign gold China and Russia really hold, that is the billion US dollar question. When China announces in a certain month that it added XYZ tonnes of gold to its reserves during the previous month, are we to take that statement at face value, that the purchase was actually in the previous month? Probably not.

In reality, the Chinese state is most likely constantly accumulating gold bullion through multiple channels and into multiple holdings, and has never stopped accumulating, both on the international market as well as possibly from undisclosed domestic gold production. **China therefore most likely has significant undisclosed gold reserves.**

Can't read my, can't read my No, he can't read my poker face.
Lady Gaga

When China feels the need to reveal slightly more of its golden hand, as it is currently doing, it reclassifies a portion of this gold from an opaque holding into a more transparent PBoC account holding. These opaque holdings could include gold held by SAFE , or by China Investment Corp (CIC), or gold holdings under the control of the large Chinese banks. Remember that all of these entities were founded by and are under the control of the Chinese state.

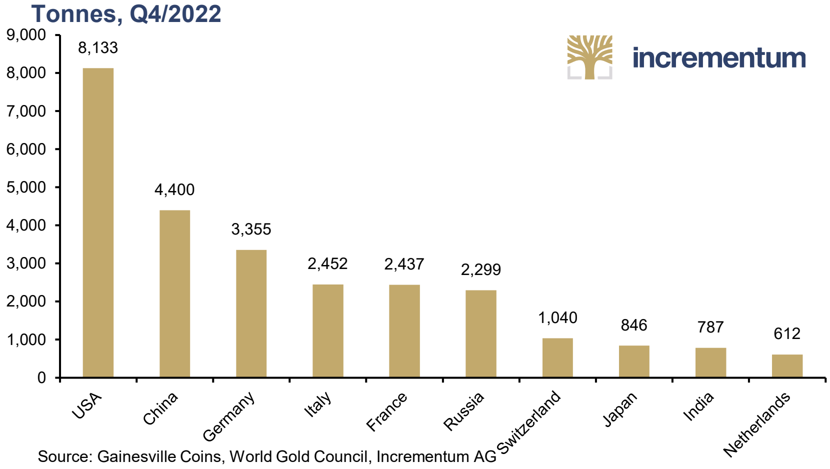
The real size of Chinese gold reserves could therefore be far higher than the PBoC's stated holdings of 2068 tonnes. **Jan Nieuwenhuijs estimates that the Chinese central bank already holds 4,400 tonnes of gold, more than twice what the PBoC discloses.**

Excursus: The PBoC holds more than twice the amount of gold officially disclosed[42] – by Jan Nieuwenhuijs

Jan Nieuwenhuijs is a financial researcher and gold analyst at Gainesville Coins. Nieuwenhuijs mostly writes about gold, covering topics such as the global physical gold market, derivative markets, central banks' gold policy, and the international monetary system.

One of the best kept secrets on this planet is the true size of the PBoC's monetary gold reserves. Based on industry sources, my estimate is that the PBoC held 4,400 tonnes at the end of 2022, which is more than double what they officially disclosed. **This amount would make China the second largest gold reserve country after the USA.**

Top 10 Countries by Gold Reserves (China is an Estimate), in Tonnes, Q4/2022



Source: Gainesville Coins, World Gold Council, Incrementum AG

The wise man doesn't tell what he does, and never does what cannot be told.
Chinese Proverb

Most investors in the gold space are aware that the PBoC underreports its gold reserves. China is a very large player in the global economy, with massive foreign exchange, but their gold reserves are relatively low. Officially they held 2,010 tonnes by December 2022. For the PBoC to openly buy significant amounts of gold would rock the gold market and drive up the price. Therefore, they choose to buy covertly to get more gold for their US dollars.

Some gold commentators try to gauge the true size of the PBoC gold reserves by using Chinese mine production and import numbers, and then estimate what share is bought by the central bank. This approach is flawed, in my view. In the Chinese domestic market, virtually all mine output, nonmonetary import flows, and recycled gold is sold through its central bourse, the Shanghai Gold Exchange (SGE), where gold is traded in renminbi. But this is not where the PBoC buys its gold.

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

First, by purchasing gold the PBoC wants to diversify its foreign exchange reserves. Gold on the SGE is traded in renminbi, which is not suitable for the Chinese central bank. Second, gold on the SGE often attracts a premium, while metal abroad does not. Third, monetary gold crossing borders is exempt from being included in customs statistics. Abroad the PBoC can purchase metal by stealth. Fourth, a gold trader at one of the biggest state-owned Chinese banks told me the PBoC does not buy gold at the SGE but though proxy banks, such as the one he works for, abroad. Countless other industry sources have also confirmed the PBoC doesn't buy gold at the SGE. In early 2017, author and gold commentator Jim Rickards met with three heads of the precious metals

[42] The following section was written by Jan Nieuwenhuijs of Gainesville Coins.

departments of large Chinese banks. Rickards stated in the Gold Chronicles podcast published January 17, 2017:

> *"What I don't know is about the Shanghai Gold Exchange sales; they're pretty transparent – how much of that is private and how much of that is the government [PBoC]? And I was sort of guessing 50/50, 70/30, whatever. What they told me, and these guys are the dealers, it's 100% private. Meaning, the government operates through completely separate channels. The government does not operate through the Shanghai Gold Exchange. … None of what's going on on the Shanghai Gold Exchange is going to the People's Bank of China."*

The above implies there is but one approach to figure out how much the PBoC actually holds: through intelligence from those dealing with the PBoC – bullion bankers and people at refineries and secure logistics companies around the world.

He who blames others has a long way to go on his journey. He who blames himself is halfway there. He who blames no one has arrived.
Chinese Proverb

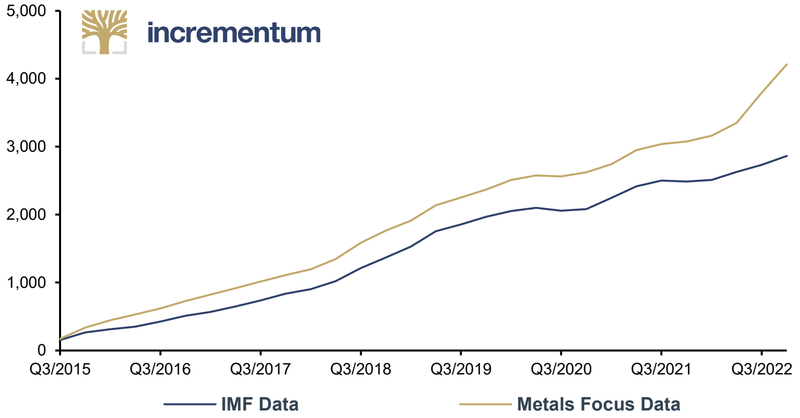
In 2015, I had the opportunity to talk to a gentleman who worked at one of the big consultancy firms. Obviously, he was well connected in the industry. For political reasons it was very difficult for his company to go on record with the PBoC's true holdings, though he told me his team estimated they were almost twice the official number. At the time, the PBoC disclosed to have 1,700 tonnes, so in reality it was closer to 3,300 tonnes. **But how do we know how much they've bought since then?**

Every quarter, the WGC publishes the Gold Demand Trends report, which contains data provided by Metals Focus (MF) on mining output, scrap supply, retail bar demand, ETF hoarding/dishoarding, etc. In these reports there is a total stated for the official sector: the net purchase or sale by all central banks and international financial institutions combined. This is an estimate based on MF's field research and doesn't necessarily align with what central banks openly declare.

The key to good decision making is evaluating the available information – the data – and combining it with your own estimates of pluses and minuses.
Emily Oster

By comparing the WGC's official sector estimates to what the official sector publishes, we can deduce what's bought covertly. Two people familiar with the matter, who prefer to stay anonymous, told me that the majority of these clandestine purchases can be ascribed to the Chinese central bank. Let's take 80% of the difference between the WGC's data and the official numbers released by the IMF as PBoC acquisitions. Since 2015, the gross difference has mushroomed to 1,375 tonnes. The PBoC thus may hold about 1,100 tonnes, i.e. 80% of 1,375 tonnes, more than in 2015, or 4,400 tonnes.

Cumulative Gold Purchases since Q3/2015, in Tonnes, Q3/2015-Q4/2022



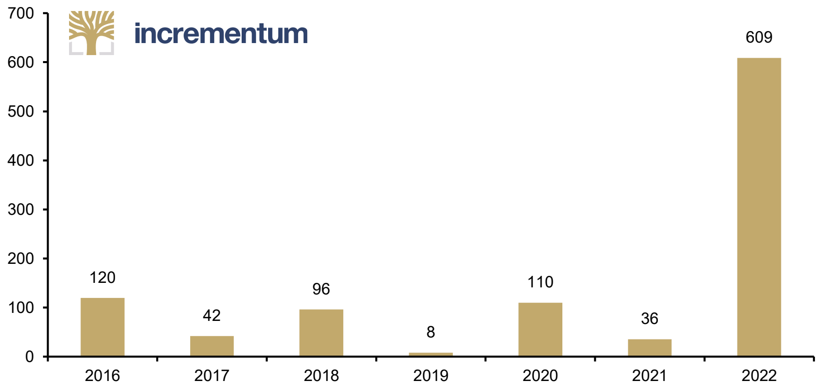
Source: Gainesville Coins, IMF, Metals Focus, Incrementum AG

To the data "reported by the IMF," the reserves of all countries and international financial institutions were added. Then the numbers for Australia, Türkiye, and the BIS were corrected, due to gold loans and swaps on their books. The IMF doesn't take loans and swaps into account when estimating official sector buying. The resulting series differs from the IMF's "world" series.

I was in charge of Chinese foreign reserves. I would make a plan to get my gold reserves to at least the average in the next few years. I'd probably double my holdings each year. Or at least I would try to.
Kevin Muir

Most of the PBoC's surreptitious purchases since 2015 were made in 2022, when it bought 600 tonnes. The war in Ukraine – and the US and the EU freezing US dollar assets of the Russian central bank as a result – have pushed the PBoC into speeding up purchases. **At 4,400 tonnes, the Chinese still hold relatively little gold compared to other large economies, such as Germany, France, and the US. We can expect the PBoC to continue to buy large amounts of gold in the years ahead, which is supportive of the gold price.**

Estimated Annual PBoC Gold Purchases, in Tonnes, 2016-2022



Source: BIS, Gainesville Coins, IMF, Metals Focus, World Gold Council, Incrementum AG

As you know, we are increasing our gold holdings, although this comes with market risks. … The price of it [gold] swings, but on the other hand it is a 100 percent guarantee from legal and political risks.
Dmitry Tulin

After this excursus into the Chinese gold holdings, we now turn our attention to Russia, as the Russian Federation could also have far more gold than its disclosed reserves of 2,330 tonnes. As well as undisclosed gold reserves that could be held by the Bank of Russia, Russia may be holding undisclosed gold in its sovereign wealth fund, i.e. the National Wealth Fund, and in the Russian State Fund of Precious Metals and Precious Stones, i.e. the Gosfund, and even elsewhere.

Russia's National Wealth Fund is administered by the Russian Ministry of Finance, and its operational investments are carried out by the Bank of Russia. The Gosfund is managed by the state organization Gokhran, which reports to the Russian Ministry of Finance. Like China, Russia is probably accumulating gold bullion all the time through multiple channels and into multiple holdings, and only reveals slightly more of its golden hand when it feels the need to do so.

As an entrepreneur in India put it: 'Indians have learned from painful experience that the state does not work on behalf of the people. More often than not, it works on behalf of itself.
Thomas Sowell

In a centralized and highly controlled society where citizens readily obey all government rules, it is possible that the Chinese government could, if it deemed it necessary, exert control over China's huge private gold holdings, either asking that physical gold be transferred to the authorities for patriotic reasons and the greater economic good, or by even making it mandatory to do so. This would give the Chinese sovereign control over far greater gold holdings than just the monetary gold held by the PBoC and other Chinese government entities.

The ability of the Indian authorities to collect or gain control over India's 30,000 + tonnes of private gold looks less promising. Indian households are obsessed with hoarding physical gold, and previous government attempts to convince Indian citizens to hand in their gold via schemes such as the Gold Monetization Scheme (GMS) met with nearly total failure.

Geostrategic central bank gold buying: SCO / BRICS / EAEU / BRI

When central banks are asked why they hold gold, they will mostly reply that they hold gold in their reserves for security and liquidity, while citing reasons such as gold's lack of counterparty risk and default risk, that gold performs well in times of crisis, and that gold is a store of value and a portfolio diversifier.

Gold is competing for money against dollars. It is a live threat to the dollar.
Abhijit P Raorane

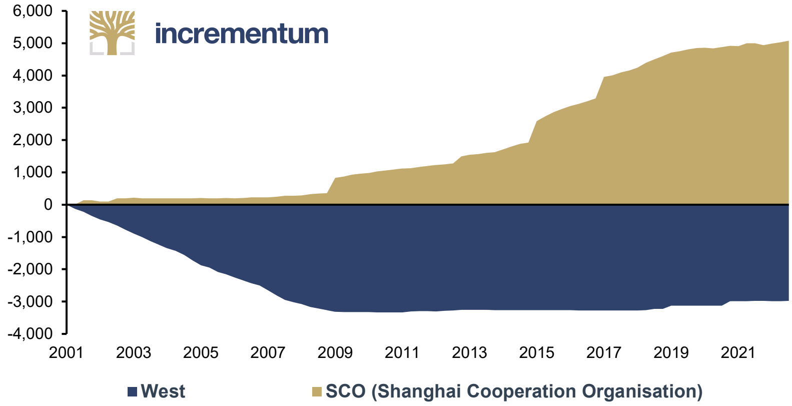
While all of these reasons for gold buying are valid and true, many Asian and emerging-market central banks are also accumulating gold for strategic reasons, i.e. to reduce their exposure to the US dollar, to hedge against the ever-heightening geopolitical risk from the West, and even in preparation for gold's reemergence at the core of a new multi-polar monetary system and trading system which could replace the US dollar.

In a number of regions in Europe and Asia, the threat of a hot war is real; the BRICS are set to expand with new members ("BRICSpansion"), which means more de-dollarization of EM trade flows.
Zoltan Pozsar

This becomes apparent when you compare the identities of the largest central bank buyers over the last 15 years to the memberships of non-Western regional groupings such as the regional security and economic cooperation-focused Shanghai Cooperation Organisation (SCO) and the economic-focused BRICS grouping. **And the overlaps here are indeed striking.**

The SCO's eight full-member countries consist of China, Russia, India, Kazakhstan, Uzbekistan, Kyrgyzstan, Pakistan and Tajikistan. Of these eight SCO members, five have been central bank gold buyers over the last 15 years: China, India, Russia, Kazakhstan, and Uzbekistan. These five central banks together purchased 3,343 tonnes of gold between 2010-2022, and furthermore were five of the top six central bank gold buyers in the world over this timeframe.

Cumulative Gold Purchases since Q2/2001, in Tonnes, Q2/2001-Q4/2022



Source: World Gold Council, Incrementum AG

Add in the remaining top-six central bank gold buyer over this period, i.e. Türkiye – which by the way is also an SCO dialogue partner – and the cumulative gold purchases by SCO members + Türkiye becomes 3,768 tonnes over 2010–2022.

Notably, the number of countries wishing to join BRICS and the Shanghai Cooperation Organization rose dramatically in the past two years, including the first year of the special military operation. The number currently stands at about two dozen.
Sergey Lavrov

Looking at the BRICS, we also see a striking overlap, with central banks from four of the five BRICS countries – Brazil, Russia, India and China – buying a cumulative 2,932 tonnes of gold over 2010–2022. There is also a long line of other countries interested in joining BRICS, such as Argentina, Algeria, Iran, Indonesia, Türkiye, Mexico, Nigeria, Saudi Arabia, UAE, and Egypt, many of which are also active central bank gold buyers. Adding to the strategic and geopolitical mix, the UAE, Saudi Arabia, Nigeria, Iran and Algeria are all members of OPEC. This interest is evidenced by recent comments from South African foreign minister, Naledi Pandor:

> *"On my desk, I suspect 12 letters. And I suspect other foreign ministers have had approaches from their own region…[Those that have] come out publicly. Saudi Arabia is one… United Arab Emirates, Egypt, Algeria, and Argentina, so it's a growing list of Mexico and Nigeria. So, there's huge interest worldwide. And once we've shaped the criteria, we will then make the decision."*

In fact, Russian Deputy Foreign Minister Sergei Ryabkov said recently that there are 16 potential applicant countries interested in joining BRICS.

Looking at the Eurasian Economic Union (EAEU), whose member countries are Armenia, Belarus, Kazakhstan, Kyrgyzstan, and Russia, we can see that EAEU members Russia and Kazakhstan together added 1,931 tonnes of gold over 2010-2022. Moreover, the EAEU is in negotiations to introduce free trade agreements with Iran, Egypt, UAE, China and Indonesia.

The overlaps between central bank gold buyers and China's Belt and Road Initiative (BRI), a.k.a. One Belt, One Road (OBOR), are also striking. As a reminder, BRI is a Chinese initiative launched in 2013 to build a huge multi-country network of transportation, energy, and communication infrastructure to connect China with countries across Asia, the Middle East, Africa and Europe, so as to accelerate economic growth, trade, and investment across this network.

I follow the yellow brick road. I don't know where it's going to lead me, but I follow it.
Grace Jones

The initiative takes the form of land-based transportation routes, from China through Central Asia to Europe, i.e. the Silk Road Economic Belt, and sea-based transportation routes from China via Southeast and South Asia to the Middle East, North Africa and Europe, i.e. the Maritime Silk Road. **Yet again, nearly all of the countries appearing on the top central bank gold buyers list over the last 15 years are also in one way or another connected to the Belt and Road Initiative.**

Realize that everything connects to everything else.
Leonardo DaVinci

While the parallels between the BRI and gold are striking, China's thinking on this topic had already been telegraphed. In 2016, the SGE launched the SGE Gold Road initiative, proposing a physical gold trading route from China to Europe, which aims to "promote gold market cooperation between China and the countries along the 'One Belt and One Road' route", and which would connect international gold supply chains to the Chinese gold market.

Following this in 2018, Hong Kong's Chinese Gold and Silver Exchange (CGSE) proposed a gold trading corridor that would connect the CGSE and the CGSE's bonded warehouse in the Qianhai free-trade zone, near Shenzhen, with precious metals traders and commercial users in countries along the OBOR routes, such as Cambodia, Singapore, Myanmar and Dubai.

The SGE and CGSE initiatives are similar in that they both aim to promote the integration of Asian gold markets along the Belt and Road countries. Both instances could be thought of as versions of a Belt and Road Gold Route idea, or a 21st century Silk Route but for gold, i.e. a Gold Route.

According to a Russian foreign policy statement from March 31, 2023:

> *"In order to help adapt the world order to the realities of a multipolar world, the Russian Federation intends to make it a priority to enhance the capacity and international role of the interstate association of BRICS, the Shanghai Cooperation Organization (SCO), the Commonwealth of Independent States (CIS), the Eurasian Economic Union (EAEU), the Collective Security Treaty Organization (CSTO), the RIC (Russia, India, China) and other interstate associations and international organizations, as well as mechanisms with strong Russian participation"*

The US has been annoyed but has not retaliated in any way, which in turn has emboldened Saudi Arabia to continue deepening its relationship with America's chief adversaries.
Shadi Hamid

Western sanctions and Russian asset freezes have now jolted all non-Western countries to sit up and realize that any one of them could become a sanction target of the US and its allies. So, these countries, such as Saudi Arabia, are motivated to join and align with alternative organizations and initiatives such as the SCO and BRICS for reasons of protection and safety in numbers, as there is more powerful representation from being in one or more of these grouping.
These same countries are also motivated to buy and accumulate gold, because they realize that the world is moving towards a new global system based on cooperation

and not coercion, and that gold is undoubtedly going to play a part in such a new global monetary system and international settlement system, via initiatives to be launched by the very same organizations and initiatives (SCO/BRICS/BRI/EAEU) that these countries are scrambling to join.

The nonaligned are becoming aligned

In fact, it is not too far-fetched to say that many of the ca. 120 (!) nonaligned countries – those countries in the Non-Aligned Movement (NAM) – are now explicitly becoming aligned. As this alignment gains critical mass, expect it to accelerate and pull in countries across the Global South and the "non-West".

Clowns to the left of me
Jokers to the right
Here I am stuck in the middle with you.
Stealers Wheel

This alignment could also put a strain on the relationships between the member states of the Group of Twenty (G20), which, remember, is a grouping of 19 large industrialized and emerging economies plus the EU. Starting with the G20, take away the EU and the G7 (Canada, France, Germany, Italy, Japan, UK and US) and you are left with the BRICS and seven other countries: Argentina, Australia, Indonesia, South Korea, Mexico, Saudi Arabia and Türkiye.

While Australia will always side with the G7, and possibly so too would South Korea, the remaining five nations are far more affiliated with the BRICS. Indeed, all five of the remaining countries – Argentina, Indonesia, Mexico, Saudi Arabia and Türkiye – have already expressed interest in joining BRICS.

Conclusion

It is now apparent that Western financial sanctions against Russia have sent seismic shocks across the geopolitical landscape and triggered many nations into examining how best to deal with these new-found risks and into questioning when and not if the world will become more multipolar. **All of this is happening in a world in which gold has been flowing from West to East, thereby boosting gold holdings of the East at the expense of the West, while increasing the importance of Asian gold markets.**

It has become the new truth of the early 21st century that the western world we have known is fast losing its pre-eminence to be replaced by a new international system shaped either by the so-called BRICs, the "rest" or, more popularly by that very broadly defined geographical entity known as Asia.
Michael Cox

There is a huge and unmistakable overlap between the central bank buyers of gold and the countries that are members and aspiring members of institutions such as the SCO, BRICS, and China's Belt Road Initiative. Russia, China and India are even actively facilitating discussions for more countries to align with SCO and BRICS. In effect, the nonaligned countries across Asia and beyond are now aligning into an alternative gold-anchored bloc. **Countries are now taking sides, with the G7 countries and allies on one side and the BRICS/SCO-led coalitions on the other.**

China via the SGE has the infrastructure in place to create gold pricing based on physical supply and demand of gold, and Russia's proposal for a Moscow World Standard would be complementary. If and when they need to detach from the gold pricing of London and New York, China, Russia and their allies have a deep, liquid market of physical trading, physical settlement, physical vaulting and international linkages, to initiate a physically-led gold price discovery system.

When China and Russia restarted announcing updates on their gold reserves following Xi Jinping's visits to Saudi Arabia in December and Russia in March, this was China and Russia symbolically saying: "*We have gold, we have more gold than we're saying, and we are going to use this gold in a new international system*". Given the high proportion of 'undisclosed' gold buying by central banks, many other countries may also not be showing all their golden cards yet.

Scaramanga? Oh, yes! The man with the golden gun. Born in the circus.
James Bond

Central bank buyers from these actively accumulating countries are holding gold as a geopolitical weapon and a monetary tool, knowing that gold can now become part of a new monetary system. These central banks want the gold price to be higher.

By definition, a showdown involves two or more sides who use all of their resources and power to bring matters to a head, to reach a conclusive settlement of an issue, or to reach a decisive outcome. In poker, a *showdown* refers to the last round of the game, when the players are required to all at once reveal their hands so as to declare the winner.

I believe in the Golden Rule - The Man with the Gold... Rules.
Mr. T

While we may not yet be at the final showdown, we appear to be entering this final round. This round could be triggered when the major Eastern powers and their allies, through the introduction of a gold-backed currency or gold-backed international settlement unit, force the West to react. That could then precipitate the showdown, where the countries on each side are literally forced to reveal all of their golden cards, that is, how much gold they each hold. **With gold having flowed in vast quantities from West to East over the last two decades, it would appear that the East has the upper hand.**

Without State Intervention – China's Historic Silver Standard

Those who do not understand the past do not really understand anything.

Stefan Zweig

- The Chinese silver standard began and ended primarily due to foreign influences. Even today, foreign monetary policy has a surprisingly strong impact on China – something China, in conjunction with the rest of the BRICS, wants to change.
- Different monetary standards can coexist. In the 19th century, the world was by no means uniformly on the gold standard, and today's global debt monetary standard is by no means set in stone. It is possible that we will see real competition between monetary systems in just a few years' time.
- Although China was accessible to foreigners to only a very limited extent until 1842, trade was brisk. Even decoupling will not end international trade, but costs are likely to rise: The development of a corresponding infrastructure, increasing trade regulations, and rising tariffs will cause prices to rise.
- Hong Kong will probably lose its function as a gateway to China by the 2030s at the latest; and Singapore and Dubai could take over parts of that role, just as Manila did at the time of the silver standard.

A Silver Standard of a Special Kind

History Does Not Repeat Itself, But It Rhymes.
Mark Twain

Mark Twain's bon mot about history rhyming and not repeating itself is just as hoary as the saying that history only teaches us that we humans learn nothing from it – and yet it is always worth taking a look at the history book. **That is certainly the case with the Chinese silver standard.**

The Chinese silver standard was not only one of the longest-existing coin standards but also came about (almost) without the intervention of the Chinese government. Rather, it was due to a development on the other side of the world: With the (re)discovery of America by the Genoese Christopher Columbus on behalf of the Spanish crown in 1492, Spain rose to become the first truly global power in the course of the following years**.** In Charles V's empire, the sun literally never set.

Weather wise, it's such a cool, cool day
Just say those words, we'll whip those birds
Down to Acapulco Bay.
Frank Sinatra

By the middle of the 16th century, the first global trade network had thus already been established: The Spanish brought silver from Mexico, Peru and Chile westward across the Pacific to China and purchased tea, porcelain, silk, and spices there. **The crucial transshipment port for this trade was Manila, the capital of the Spanish colony in the Philippines.** The *Manila Galleon* then brought the Chinese trade goods back east. They were unloaded in Acapulco and taken overland to Vera Cruz on Mexico's east coast. **From there, together with other goods from the New World, especially precious metals, they went on to Spain by means of the Spanish *treasure fleet*.**

From 1585, only one galleon per year was allowed to make the long voyage across the Pacific. The ships had an average cargo volume of 300–500 tons, but some could even carry up to 2,000 tons. **Trading profits were exorbitant throughout the 17th century and well into the 18th century. After deducting all costs, the return on investment was 200–300% per trip.** A bale of silk, for example, was worth about ten times in Mexico what it had sold for in Manila on the trip east. It was not until the end of the 18th century that profits began to decline as new players entered the international trading arena in the form of the United States and the British Empire, and as trade routes changed. The trade system lasted until 1821, when Mexico gained independence. **But its effects lasted even longer, because the silver standard established thanks to overseas trade between Spain, the Spanish colonies, and China lasted well into the 20th century.**

Why were the Chinese so interested in the precious metal? The easy answer is that China didn't want any of the goods the Spanish could offer them. To level the balance of trade, they traded Chinese goods for silver.
Richard Mills

China had virtually no interest in foreign goods. Nothing that was produced in Europe in the 17th, 18th and 19th centuries or in the European colonies overseas really aroused the interest of the Chinese. **The only thing they wanted for their goods was silver, which the Chinese preferred to gold at the time due to its much higher relative valuation in their domestic economy**. During this period, the gold/silver ratio in China was 1:3, while in Europe it fluctuated between 1:15 and 1:20 throughout the Middle Ages and the early modern period. Here, the European range better reflected the ratio of deposits of the two precious metals in the earth's crust.

Europeans, on the other hand, were almost crazy about Chinese goods, especially tea, silk, and porcelain; but spices, precious stones and woods also sold like hot cakes. This posed a problem for the international trading system in that the trade balances were anything but balanced: The Chinese – as at present – had huge surpluses, while the Europeans – first the Spanish, then more and more the English as well – had huge deficits vis-à-vis the Middle Kingdom. The Spaniards were not particularly bothered by this since the silver mines in Mexico and Peru seemed almost inexhaustible. **It is estimated that about half of the silver mined in the Americas between 1500 and 1821 went to China.**

Opium was for the large part of the 19th Century, the second-most important source of revenue for the colonial state. It was only outmatched by land taxes.
Dr. Rolf Baeur

The British, on the other hand, were looking for a trade-balance solution and found it in opium. The East India Company massively promoted its cultivation in Bengal and India, but used private merchants and smugglers for the trade, as the East India Company did not want to lose its trading privileges. The outcome was that the trade deficit was not only balanced but turned into a massive surplus. Consequently, **the equivalent of about 20mn silver dollars flowed out of the Chinese empire between 1820 and 1835.** In addition to the massive opium imports, the independence efforts of Central and South American countries were also responsible for this. **Less and less silver was mined, and the transpacific trade volume as a whole dropped significantly due to the development of new trade routes.**

The Chinese have one very broad generalization about their own history: they think in terms of 'up to the Opium War' and 'after the opium war'…a century of humiliation and weaknesses to be expunged.
Alison Kaufman

As a result, China aggressively cracked down on the smuggling of illegal, foreign opium. Although opium was also grown in China, it was of poorer quality and was mostly used as a medicine. The British would not accept the restrictions on the opium trade and then solved the problem militarily in 1839–1842 and 1856–1860. **In the two Opium Wars, they forced the Chinese emperor to legalize the import of opium. The British Empire balanced its trade by driving two-thirds of the Chinese population into drug addiction.** The First Opium War ushered in the *Century of Humiliations*, in which 16 "unequal treaties" were imposed on China; and the Middle Kingdom, still the largest economy on Earth in the 18th century, sank to the status of a semi-sovereign power.

This period is unforgotten in China. The memory of the oppression by the colonial powers is one of the core pillars of current policy under Xi, combined with the promise and warning never to let it happen again.

Whoever fights monsters should see to it that in the process he does not become a monster. And if you gaze long enough into an abyss, the abyss will gaze back into you.
Friedrich Nietzsche

Despite this, it is noteworthy that the British Empire began to aggressively solve the "opium problem" and the associated trade deficit and resulting silver outflow at the very moment when a silver standard was introduced in the crown jewel of the Empire, India. **In 1835 – just 4 years before the outbreak of the Opium Wars – the Currency Act of 1835 ended the Indian coin chaos.** In all, prior to standardization by the Currency Act, some 1,000 units of coinage of varying weights and finenesses based on gold, silver, copper, bronze and other metals circulated on the subcontinent, until the Indian Rupee, with a fine weight of 165 grains or about 10.50 grams of silver, was established as the standard. **Gold was demonetized.**

The Indian silver standard, unlike that in China, lasted only a short time. In the 1870s, several European countries, in particular the German Empire, which was newly founded in 1871, moved away from the bimetallic standard. The US also joined the gold standard after the Civil War with the Resumption Act of 1875. **Consequently, declining demand from these regions depressed the value of silver. This resulted in a significant loss of purchasing power for the Indian silver rupee.** After numerous attempts to solve the resulting problems, the government in India finally followed the recommendations of the Fowler Report, abandoned the silver standard, and implemented the British gold standard. Sovereigns now became legal tender on the subcontinent.

Underlying most arguments against the free market is a lack of belief in freedom itself.
Milton Friedman

In China, on the other hand, the silver standard manifested itself without the intervention of state power. On the contrary, the emperors of the early Ming Dynasty were definitely not friends of a monetary use of the precious metal. As late as the mid-15th century, the use of silver as currency had been imperially banned**. Nevertheless, the silver flowing into the country thanks to the trade surplus with the rest of the world formed the basis of the coming silver standard**. This occurred first in southern China and eventually throughout the country. Only in retrospect did the imperial family accept the development. **With the Great Tax Reform of Zhang Juzheng in 1581 under Emperor Wanli (1563-1620), silver was officially given the status of currency.** From then on, taxes and duties were to be paid in the precious metal instead of rice throughout the empire.

Man will fight and resist what they do not understand.
Oluseyi Akinbami

On the one hand, Wanli heralded the decline of the Ming dynasty, for both in northern China and in the regions further away from the coastal areas, silver was much scarcer and thus more valuable. At the same time, however, uniform tax rates applied in all regions. **As a result, there was massive resistance to silver as currency, with regional uprisings.** In addition, the poorer provinces were less able to fulfill their tasks - there was simply a lack of capital, for example to maintain infrastructure or to pay soldiers. The latter meant that the northern borders of the empire could no longer be defended effectively. Consequently, the Ming dynasty was replaced in 1644 by the Qing dynasty, which originated in Manchuria, a territory northeast of the Chinese heartland. **On the other hand, however, the status of silver as the currency of China was cemented.**

There is beauty and humility in imperfection.
Guillermo del Toro

This Chinese silver standard was by no means uniform either, in the sense that it generally used coins and/or silver certificates whose shape, weight or appearance were prescribed by the state, as was the case, for example, with the gold standard implemented by the British Empire or the standard established by the Latin Monetary Union. There are circulated coins and bars highly different in weight, shape, appearance and, of course, fineness.

Gradually, however, foreign silver dollars began to prevail over domestic silver ingots, as their uniform weight and fineness made them much more suitable for trade. **Remarkably, the Qing refused to strike their own coins for a long time.** For the first time in 1898, Guangdong (Canton) Province in southern China issued its own coins, which were similar in shape and weight to the Mexican peso and were quickly adopted by other provinces. **Nevertheless, it took another 12**

years before the imperial house officially announced the issuance of its own currency, called the yuan, Chinese for *round*.

Empires die, like all of us dancers in the strobe-lit dark.
David Mitchell

A year later, in 1899, the Silver Coin of the Great Qing was minted and issued for the first time as the yuan, but in the same year the rule of the Qing ended, as did the institution of the Chinese imperial throne. The newly proclaimed Republic of China, however, adopted both the name *yuan* and the specifications of the new coin and codified them into law in 1914.

The silver trump of freedom roused in my soul eternal wakefulness.
Frederick Douglass

Just as the Chinese silver standard was freely established, the Chinese banking system also differed significantly from European ones. While in Europe the first central bank was established in 1668 with the Swedish *Riksens Ständers Bank* (today *Sveriges Riksbank*); and shortly afterwards the Bank of England, founded in 1698, came to control the British financial system; in China a free banking system prevailed for a long time. **Countless private and mostly regionally active banks took care of the financing of trade.** As a relic from this period, the banknotes issued by three banks – Bank of China, HSBC, and Standard Chartered – still bear the imprint "...promise to pay the bearer on demand in its office the sum of ... Hong Kong dollars". It was Deng Xiao Ping who remembered the success of this free banking system that – at least in the early days of his reforms, until around the beginning of the 1990s – relied primarily on small, regionally operating banks to finance China's incipient economic upswing.

The Sudden End

The Spanish colonial empire was replaced first by the French, then by the British. **The Chinese silver standard, however, remained until it came to an abrupt end after about 350 years**. **As with its beginning, the causes of its end lay primarily abroad.**

We are often told that the Gold Standard will shackle us to the United States ... I will tell you what it will shackle us to. It will shackle us to reality. For good or for ill, it will shackle us to reality.
Winston Churchill

After World War I, Winston Churchill, then Chancellor of the Exchequer, initiated the country's return to the gold standard, in 1925. **However, he made a crucial mistake.** He insisted on the pre-war valuation of the pound against gold – although, due to the inflation caused by the world war, the pound should have been devalued by at least 50%. **The now significantly overvalued pound made British goods more expensive for export and caused domestic unemployment to rise dramatically.**

To combat these consequences, on the other side of the Great Pond, the Federal Reserve, which had been installed only about a decade earlier, lowered interest rates. **However, this triggered a real estate bubble in Florida, which then spilled over into Wall Street. On Black Thursday, October 24, 1929, the Great Depression began.** In fact, however, this primarily affected Europe and the USA. **Asia, and especially countries like China that were not subject to the gold standard, were hardly affected at first.** On the contrary, China experienced relatively strong economic growth between 1927 and 1937, i.e. until the outbreak of the second Japanese-Chinese War, during the so-called Nanjing Decade.

Yesterday's price is not today's price!
DJ Khaled

In the USA, however, the world economic crisis led to Nevada Senator Key Pittmann perpetrating his greatest coup, in 1933. Pittmann, who as a shareholder of the largest silver mining company in Nevada was not entirely disinterested, had already shepherded the enactment of the Pittman Act in Congress in 1918, obligating the USA to purchase silver from domestic mines to a maximum of USD 350 million and to convert this into silver dollars. With the Thomas Amendment to the Agricultural Adjustment Act of 1933, the US committed itself to buying silver from abroad at a price well above the market price: **The premium the US was willing to pay was a whopping 60% until the market price for silver was either USD 1.29/oz. or the value of US silver reserves was equal to one-third of US gold reserves.** In this way, the Roosevelt administration wanted to reduce the amount of silver held by its citizens and boost the circulation of money to overcome the Depression.

Good things never last, bad things never die.
John Darnielle

The direct consequence, of course, was that foreign silver flowed into the US in large quantities, and it was mainly Chinese silver that fed this flow. Almost overnight, China was plunged into a depression. **In 1935, China abandoned the silver standard and private silver ownership was banned.** At the same time, the central bank, established in 1924, issued a new fiat currency called *fabi* – literally "legal tender". All private silver had to be exchanged for the new currency within six months**. Silver was now subject to the central authority of the nationalist government, and with the demise of the silver standard also ended the time of the Chinese free banking system**. The Minister of Economy and Finance, and incidentally the richest man in China, H. H. Kung, rigorously forced the banks to take over the financing of the state by buying newly issued bonds. **Unsurprisingly, the new monetary system also brought inflation to China.**

Increasingly unrestrained, the republican Kuomintang government under Chiang Kai-shek expanded bond spending, primarily, but not only, to finance the war against Japan and the Communists. **As the Republic's defeat by the Communists began to emerge, the Chinese monetary system finally tipped into hyperinflation between 1947 and 1949.** Chiang Kai-shek's republican government took refuge in Taiwan.

Of our elaborate plans, the end
Of everything that stands, the end
No safety or surprise, the end.
The Doors

It is ironic that the end of the silver standard coincides with Mao's Long March. Although de facto defeated and nearly routed in 1934, the Communists were able to retreat to Yan'an in the mountainous region of Shaanxi. Here they were able to regroup and recover; and a key factor in their resurgence was that the state's monetary policy from that point forward ensured that the poorer societal strata in particular became more deeply impoverished, thereby swelling the ranks of the Communists. **The ever-increasing corruption of the Kuomintang, their mendacity and complete lack of interest in the problems of the common people, especially in the Chinese hinterland, brought the Communists even more support.**

Conclusion

The history of the Chinese silver standard contains some lessons that are also interesting for the present and can provide pointers as to the direction of certain developments.

If major economies slam on the brakes or take a U-turn in their monetary policies, there would be serious negative spillovers…They would present challenges to global economic and financial stability, and developing countries would bear the brunt of it.
Xi Jinping

On the one hand, it shows that a stable currency standard can be established without political intervention, but on the other hand that such a standard is at risk of being influenced and possibly undermined by foreign factors**. Just as US policy brought down the Chinese silver standard back then, it is precisely China that faces the greatest risk from US monetary policy today**. The Federal Reserve's interest rate turnaround also affects the US economy and citizens, but the Second and Third Worlds are disproportionately harder hit by it. It is therefore significant that Chinese President Xi warned the USA in no uncertain terms about its interest rate policy during his opening speech at the World Economic Forum at the beginning of last year; and it speaks volumes that since the interest rate turnaround, the Chinese real estate market has been embroiled in its greatest crisis since the country's reform and opening era began.

It fits into this picture that 60% of all loans granted by China under the Belt and Road Initiative (BRI) are now nonperforming. The People's Bank of China (PBoC) in particular is having to intervene more and more. The background features not only mismanagement and the sometimes completely oversized nature of the projects in question, but above all the interest rate reversal by the US central bank. **China, which uses its US dollar surpluses for the development of infrastructure in the Third World in order to gain political influence and access to raw materials, is being hit hard by this.**

It is noteworthy that in view of this debt crisis, China is not only questioning but simply rejecting the previous debt-cut procedure, in which lenders such as the IMF and the World Bank basically get off scot-free:

> *"China has contributed more than anyone else to implementing the G20 Debt Service Suspension Initiative […] In contrast, Western creditors claim they need to maintain their credit rating and have thus refused to be part of the debt relief and service suspension effort."*

The BRICS hold G7 currencies as their reserves, and not the other way around. And yet, the BRICS just flipped the G7 in economic size.
Lyn Alden

At a press conference on April 14, 2023, Wang Wenbin, spokesman for the Chinese Ministry of Foreign Affairs, further called for all lenders to participate fairly in the restructuring of loans. **More and more, it is becoming apparent that a split in the international financial and monetary system is by no means unthinkable**. China has long been trying to establish alternatives to existing international institutions such as the IMF and the World Bank.

What applies to the international financial system may apply a fortiori to global trade. In this respect, it is interesting to note that although China was de facto off-limits to foreigners for a long time – at least until 1842, when the British opened the country by force of arms – except for very few areas, there was nevertheless a lively indirect trade. The center of this trade was initially Manila, but by the middle of the 18th century it increasingly included Guangzhou. **As a result of the US-China antagonism and Chinese domestic and economic policies, we will probably see more and more disentanglement of the Western and Chinese economies in the coming decades.** Trade will still be extensive, but it will probably be less and less direct, and there will be significantly fewer foreigners in China – both as a consequence of the restrictive Zero Covid policy and due to the political programs such as Made in China 2025 and the concept of dual circulation[43]. Since the West in particular has benefited on the cost side from the shift of production to China and has actually experienced falling prices for almost all consumer goods for decades, we can expect rising costs for consumers if this trend is reversed. The more trade barriers there are, the more expensive the traded products will become.

Historically, Hong Kong has served as an important bridge between China and the world. Our freedoms, stability and the rule of law have been the reasons for our success.
Joshua Wong

This will then also affect Hong Kong, still *the* gateway to China. The Covid-19 measures of *Asia's World City* and – more crucially – Beijing's ever-increasing influence in the formally autonomous city are increasingly driving away the international public there. The *National Security Law* enacted in 2020 in response to massive protests undermines Hong Kong's most important asset, namely confidence in its institutions and, in particular, legal security in the special economic zone. From this perspective, Singapore is becoming more and more attractive for many international companies that had established their East and Southeast Asia bases there – "China + 1" has now become the buzzword when it comes to locations in Asia.

It's much cheaper in England compared with Hong Kong. Property prices are three or four times lower in parts of Berkshire. But being here has nothing to do with money. You can't buy freedom, you can't buy democracy. I can't buy back the Hong Kong I used to have.
Ex-Hongkonger now residing in UK

In addition, Hong Kong has been and continues to be the decisive hub through which a large part of Chinese foreign gold purchases flow. **However, Hong Kong is also losing its rank here.** There is an increasing migration of Hong Kong's autochthonous population: **About 70% of the city's citizens can emigrate easily to the UK, Australia or Canada, and more and more are taking advantage of this opportunity.** They see no prospects in a Hong Kong that is becoming increasingly *Mainland Chinese*, while (almost) all doors are open to them in the UK or Canada, since they represent a well-educated, highly motivated, and generally multilingual workforce. **The more Hong Kong becomes integrated into China, the more it dis-integrates from global – or least Western – trade flows.** Already today, the US defines Hong Kong as part of China under trade law, and the city's exports to the US are subject to the same punitive tariffs as goods from the mainland.

I want to go to - what's that hot country with a lot of money? - Dubai.
Grandmaster Flash

If the contrast outlined above continues to gain momentum, then Hong Kong could also be hit with sanctions, which will then presumably target the heart of the Hong Kong economy, the financial industry. This is analogous to the sanctions with which the US is currently trying to destroy the Chinese semiconductor industry. The trade in gold is then certainly not likely to remain unaffected. **Subsequently, Dubai could become a kind of Manila in terms of gold trade in the 21st century, further expanding its position as a hub and becoming the most important gold link between East and West.**

[43] *See* "Gold Mining in China," *In Gold We Trust* report 2021

Shifting Narratives, Shifting World

We welcome illusions because they spare us unpleasurable feelings, and enable us to enjoy satisfactions instead.

Sigmund Freud

- **Storytelling has always been part of the human condition. Narratives possess a profound and evolutionarily ingrained capacity to enable coordination and structure within societies.**
- **Narratives in the sense of collectively effective narratives can be constitutive for reality, social structures and institutions.**
- **The fiat money system was the product of an emergency response. To bolster public trust in its efficacy, Nixon strategically formulated a robust counter-narrative.**
- **The current globalization crisis is accompanied by the end of the “Great Moderation,” which is associated with an upheaval of many certainties and narratives.**
- **Jerome Powell has taken on the role of hardliner, invoking the legacy of Paul Volcker in his uncompromising approach to fighting inflation, even at the risk of disrupting the economy and financial markets.**
- **Central bankers are trying to generate confidence and stability by using symbolic politics to underpin the narrative of determined inflation fighters - but given their conflicting goals, this is probably just a “hawkish bluff.”**
- **A showdown of narratives could soon emerge.**

Introduction

In his bestseller *The Great Illusion*, originally published in 1909 under the title *Europe's Optical Illusion*, Norman Angell, who was later awarded the Nobel Peace Prize, put forward the game-theoretical argument that war between industrialized nations is irrational. This is because the economic and social costs of launching a war would be outweighed by any perceived benefits. **Accordingly, a great disillusionment was to be suffered by any state leader who expected a positive payoff for his country from a war.**

A glorious book to read … pregnant ripe with the brightest promise to the future of civilized man.
Billy Hughes, Prime Minister of Australia

The book was well-received internationally, even gaining somewhat of a cult following; and Angell's central thesis was misinterpreted in the public eye to the effect that war had become something of an improbability. This had a calming effect at a time when nationalism was rampant and international tensions were running high. But there was obviously a strong desire to misjudge the seriousness of the situation and to fall for the thesis of the impossibility of war – and thus, as the events of the following years show, to indulge in a great illusion.

[W]hen a country […] has a middle class big enough to support a McDonald's, it becomes a McDonald's country, and people in McDonald's countries don't like to fight wars; they like to wait in line for burgers.
Thomas L. Friedman

It is distressing how, after more than a hundred years, large sections of the public and the political elite still hold exactly the same misconception. **Countries with McDonald's outlets do not wage war against each other, Thomas L. Friedman argued in a 1996 opinion piece in the New York Times.** While there have been counterexamples to that observation in the past two decades (e.g. the 2006 Lebanon War, the 2008 Russo-Georgian War, or the Turkish involvement in the Syrian civil war), the notion of a world order that suggested "we have moved on from the era in which wars take place" (Peter Sloterdijk) persisted until February 24, 2022, when Putin launched the Russian invasion of Ukraine, to the surprise of the greater international community.

I have always been convinced and I still believe that change can be achieved through trade.
Peter Altmaier

The narrative of the end of war through economic integration is by no means the only one that has been debunked. In the following discussion, we will highlight many others, particularly in the areas of the economy, society and the monetary system, which have recently fallen by the wayside. It is no coincidence that terms such as *caesura*, *rupture,* or *Zeitenwende* have been doing the rounds since February of last year. We want to pick up on these, but we do not want to discuss them narrowly against the backdrop of the Russian attack on Ukraine. Rather, our assessment suggests that the era of the *Great Moderation*, a period marked by falling interest rates and an unusually low degree of macroeconomic volatility, is coming to an end. This epochal break is reflected in the realm of the narratives that are the focus of this chapter.

Narratives and Their Performative Power

> *"The insight that myths can be as important in social reality as scientific knowledge is counterintuitive, especially for economists, since economics, more than any other social science, studies the rationalization of the world. But an appreciation for thinking in different symbolic forms can enrich economics discourse."*[44]
>
> Stefan Kolev

In Angell's game-theoretical analysis, the concept of *Homo economicus*, which posits that individuals are solely rational actors seeking to maximize their own utility, is insufficient to explain the invasion of Ukraine. In light of this failure, and in the tradition of the Austrian School of Economics, which has always valued interdisciplinary perspectives as a means of enrichment, we propose an alternative perspective, that of *Homo narrans*,[45] the narrative human being, as a more accurate and nuanced representation of human behavior. This concept recognizes the importance of storytelling and the construction of narratives in shaping our decisions and actions, offering a more complete understanding of human behavior and social organization.

"House prices can only go up" is an example of an exploded false narrative. The rise of bitcoin to challenge the monopoly of fiat currency is a contested narrative.
James Grant

Storytelling has always been part of the human condition. Narratives possess a profound and evolutionarily ingrained capacity to enable coordination and structure within societies. In fact, the state and its institutions themselves can be regarded as fictions, existing as complex imaginings whose functional efficacy is heavily reliant upon metaphorical constructs and the power of narratives. These insights are underscored in a study by literary scholar Albrecht Koschorke and colleagues, who demonstrate the remarkable capacity of formulations to create and shape reality:

> *"Between the 'soft' instruments of metaphors, narratives, and fictions on the one hand, and 'hard' institutional arrangements on the other, there is a constant exchange going on in both directions. […] Social organization […] is imagery that has become practice."*[46]

[N]arratives are contagious stories. Like the songs you can't get out of your head, they elicit thoughts and emotions. But unlike musical earworms, they also impel action.
Robert Shiller

Narratives in the sense of collectively effective telling possess immense power to shape and define our lived reality. However, they are not static or immutable entities, but rather subject to change and evolution over time. Narratives that are ultimately proven false or untenable, such as the notion that economic interdependence could preclude war, are revealed to be collective illusions. In these instances, the power of the narrative is diminished or even shattered.

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[44] Kolev, Stefan: "Ein neuer Mythos Westen" ("A new myth of the West"), FAZ, April 14, 2022, our translation
[45] Fisher, Walter: "Narration as a Human Communication paradigm: The Case of Public Moral Argument", *Communication Monographs*, 51 (1984), 1-20, p. 6
[46] Koschorke, Albrecht et al.: *Der fiktive Staat: Konstruktionen des politischen Körpers in der Geschichte Europas (The Fictive State: Constructions of the Body Politic in the History of Europe)*, 2007, p. 57, our translation

Narratives can also assume a competitive or confrontational character, as is exemplified by the ongoing struggle over the United Nations and international law. Established by the community of states to promote the supremacy of principles and universally binding law over the law of the strongest, the institution's structural flaws are now being exposed, with Russia as a member of the Security Council facing no practical consequences for flouting international law in the present case. The hard institutional arrangements are thus undermined, with the very notion of universally binding law thrown into question. To counteract this trend, symbolic gestures such as the UN resolution of March 2, 2022, have been deployed. This resolution, which garnered support from 141 countries in response to the Russian invasion of Ukraine, is touted as a critical defense against the erosion of international law and wields significant constitutive power.

Certainly, the narrative has cracks, since among the 40 countries that did not vote for the resolution are weighty countries like India and China, and those votes represent more than half the world's population. And so, as a result of the Russo-Ukrainian War, a narrative battle is being waged around the United Nations right now, and its outcome could determine the institution's future relevance.

Modernization Theory and the Old World Order: Correction or Bear Market?

Globalization is a shift in our very life circumstances. It is the way we now live. It involved the intensification of worldwide social relations.
Anthony Giddens

The United Nations is just one example of the larger drama unfolding in our era. The assumption was that economic integration would not only bring about economic convergence but also cultural convergence, meaning a convergence of values. In the West, modernization had led to the emergence of universal values such as freedom, equality, human dignity, pluralism, and human rights. Similar outcomes were expected from the modernization processes initiated after World War II under US hegemony in other nations, through their economic integration. When, after the fall of the Soviet Union, the states of the former Eastern bloc were integrated into this structure, there were many indications that economic and political liberalism would become global. Francis Fukuyama captured this narrative shortly after the Cold War's end with his oft-cited formula of the "end of history".

The idea was that as nations developed, they would become more like us in the West - the ones who had already modernized.
David Brooks

Under the aegis of the US, the only remaining superpower, attempts were made to build a *rule-based and values-driven world order* aimed at turning conflicts into cooperation. Trust could be built on the basis of mutual economic dependence – and the mutual punishability that this entailed. To paraphrase Angell, we might say that we increased the cost of noncooperative, belligerent action in order to minimize the likelihood of the latter. This world order, according to the German political scientist Herfried Münkler, seemed on the one hand to be a guarantor of peace, and on the other hand one could tinker with narratives that encompassed humanity, such as that We, humanity,

- ... fight poverty in the global South
- ... curb climate change
- ... limit the risk of nuclear conflict (Nuclear Non-Proliferation Treaty).

However, this order was also attractive to entrepreneurs and CEOs who could set up their businesses globally and open up new markets under the assumption of peace and stability. This led to the emergence of complex networks of supply chains.

Putin's invasion of Ukraine has done more than unleash Western embargoes and boost inflation. It is burying most of the basic assumptions that have underlain business thinking about the world for the past 40 years.
John Micklethwait & Adrian Wooldridge

It is therefore understandable that people tried to maintain this order and clung to its fading narrative until the end – as illustrated by Western politicians traveling to Moscow just prior to the invasion and being seated at Putin's preposterously elongated table. Inevitably, it is not advantageous for the defense of this world order, now under attack, that one has not necessarily always adhered to it oneself (cue the Iraq war). But Russia's invasion of Ukraine marked a decisive turning point, because, as Herfried Münkler has recently pointed out, the horizon of expectations has fundamentally changed:

- The instrument of establishing mutual dependencies as a confidence-building measure is – once again – disenchanted;
- institutional trust is replaced by general mistrust;
- the narrative of recent decades that economic power is becoming more important, and military power less important, is under scrutiny;
- the world is divided into zones of influence with different values, rules and rights.

There's just a lot more global conflict than there was in that brief holiday from history in the '90s.
David Brooks

The "old" world order, according to Herfried Münkler, is a "notion exposed as an illusion," (our translation) i.e., a narrative that is no longer tenable. However, this damper on globalization did not come entirely out of the blue. In a Bloomberg article entitled "Putin and Xi Exposed the Great Illusion of Capitalism," John Micklethwait and Adrian Wooldridge argued shortly after the outbreak of war that the globalization process had been running out of steam for some time. This could be seen not only in the economic data but also in its political and cultural dimensions.

Economic disintegration

Over the past two decades, the drumbeats of globalization have been reverberating at an unprecedented pace, with major events such as 9/11, the Lehman bankruptcy, Brexit, and the Trump presidency sending shockwaves around the world. Relations between China and the USA have grown increasingly acrimonious, with tariffs and trade restrictions reaching new heights. Long-term investment flows have plummeted by half since 2016, and global migration has also declined.[47] The next chart shows that merchandise exports had doubled in both the 1990s and the 2000s, but this growth was much weaker in the 2010s.

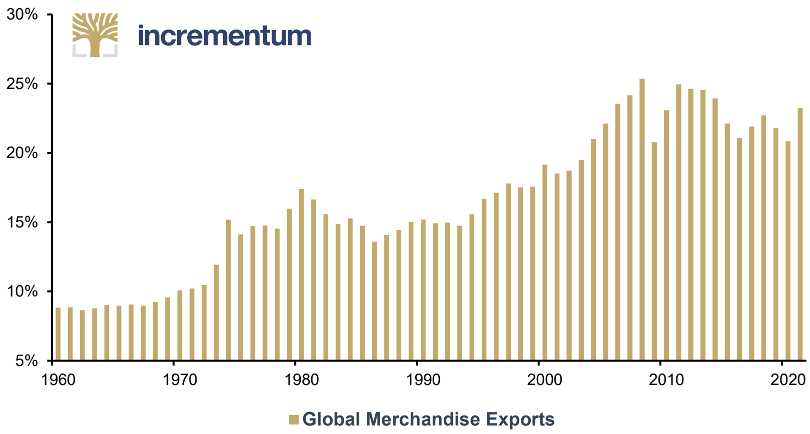
[47] For more data *see* The Economist: "Globalization and autocracy are locked together. For how much longer?"

Global Merchandise Exports, in USD trn, 1960-2021

Source: World Bank, Incrementum AG

The share of trade in global GDP, a very meaningful measure of the enormous wave of globalization in previous decades, has even been on the wane since 2008.

Global Merchandise Exports, as % of GDP, 1960-2021



Source: World Bank, Incrementum AG

It gives consumers a tax credit to buy electric vehicles that is actually about 7500 dollars, if those vehicles were made in America – MADE IN AMERICA!
Joe Biden

Trade barriers are on the rise even within the Western Hemisphere. The *Inflation Reduction Act,* signed by President Biden on August 16, 2022, supposedly aims to combat inflation and promote climate action. However, the bill's 391bn USD budget earmarked for energy transition and climate-friendly initiatives effectively constitutes a subsidy for future American industries, with a "Buy American!" slogan as its rallying cry. Moreover, it is a program that bolsters demand (for climate-friendly products) through significant additional government spending. It will therefore only stoke inflation, not mitigate it.

The transatlantic tandem is drifting toward a full-fledged subsidy race.
The Economist

This law is a flagrant violation of WTO regulations and deals another blow to Europe, which is already suffering significantly more than the energy-independent US from the consequences of the war in Ukraine. Pursuing legal action before the WTO dispute settlement panel may not yield positive results due to the institution's recent weakening.

But this package must not destroy the level playing field between our two economies, the European and the US economy.
Robert Habeck

The reaction in Europe varies from concern over competition distortion to Emanuel Macron's suggestion of a "Buy European Act." The EU Commission and the European Council presented their own individual proposals shortly thereafter. However, because not all EU nations can afford such measures, Brussels is proposing shared debt once again. This approach has disastrous consequences from a liberal economic standpoint.

Cultural and political disintegration

However, economic data are only one facet of the broader societal and global phenomenon of disintegration. The following are buzzwords that convey the cultural and political dimensions of this issue:

- clash of civilizations (Samuel P. Huntington)
- social division & populism
- democratic recession (Larry Diamond)
- somewheres & anywheres (David Goodhart)
- Jihad vs. McWorld (Benjamin Barber)

Polarizing narratives work better for the time being; they provide greater selectivity, orientation. And they give people an external cause for their own experiences of bitterness or social endangerment, and in this way can make life courses meaningful.
Albrecht Koschorke

These formulas stand in stark contrast to Fukuyama's flawed *end of history* thesis, as is now increasingly apparent. However, Fukuyama has moved beyond his 1990s perspectives, as evident in his 2018 book on identity, *Identity: Contemporary Identity Politics and the Struggle for Recognition*, where he examines the crisis of liberal democracy. He bases his analysis on the concept of *thymos*, which refers to the human need for respect, recognition, and dignity. According to Fukuyama, this need is increasingly neglected, especially by left-wing identity politics, which focuses on minority recognition to the detriment of larger segments of society. Fukuyama's critique of identity politics is thus grounded in the idea that it risks neglecting or even degrading the societal majority.

We WEIRD [Western, Educated, Industrialized, Rich and Democratic] people are highly individualistic, self-obsessed, control-oriented, nonconformist and analytical. We focus on ourselves – our attributes, accomplishments and aspirations – over our relationships and social roles.
Joseph Henry

Globalization and its associated policies have also resulted in the emergence of urban elites in many countries who wield significant influence in companies, media, universities, and other institutions, while leaving behind others who have fewer opportunities and differing self-definitions. Across countries, this growing chasm has resulted in widespread feelings of being patronized and marginalized among broad segments of society. This disparity in terms of appreciation gives rise to a great deal of potential for conflict and a drifting apart of different groups, each with their own values. On closer examination, modernization does not affect countries as a whole, but rather segments of the population, decoupling them from their societies. A certain cultural convergence between the cosmopolitan elites of the world is thus brought about; the flip side is the dynamics of social division at the national level.

Different narratives play a pivotal role in all of this. They are crucial to how people define and identify themselves and others (e.g."old, white man"). And they are key drivers of polarization, both reflecting and fueling social divisions. Narratives not only weld subgroups together internally, they also deepen rifts between different groups, creating so-called ingroups and outgroups. It is noteworthy that social media has risen in prominence over the last two decades, playing a new and powerful role in the creation and dissemination of narratives.

The following table lists some of the narratives about the supposedly debilitating impacts of the elites as examples and illustrations:

Global	Within the EU	Within Western states
China: “Century of Humiliation”	The Northern states are starving us with their trade surpluses.	The media are not free; censorship is everywhere.
Russia: “They have been treating us like a second-class country, as a regional power only since the 1990s”	The Troika is pushing our pensioners into poverty just so that we will have to pay back their bank loans.	As the corridor of acceptable opinions narrows, the boundary of what can be deemed socially acceptable becomes increasingly restrictive, pushing the bounds of rational discourse to the brink of insanity.
Encirclement of Russia by NATO	The ECB is allowing the Southern countries to finance their *dolce vita* with our savings.	Those who hold power are under the firm control of the lobbyists.
The arrogant West wants to impose its values on us.	Brussels has imposed this on us.	They want to prevent us from eating meat.
The West is decadent.	Merkel wants to impose her refugees on us.	The coronavirus is only a pretext to establish totalitarian structures.
The West itself breaks international law and interferes in domestic affairs everywhere.		They are forcing us to self-mortify, and China is blithely building new coal-fired power plants.
Our plight is solely the result of colonialism.		Every refugee is more important to them than we are.
I [autocratic leader] am leading our country back to pride and honor.		East Germans: The West Germans are arrogant.
		The West is to blame for everything.

Summary

The countries experiencing deterioration outnumbered those with improvements by the largest margin recorded since the negative trend began in 2006. The long democratic recession is deepening.
Sarah Repucci & Amy Slipowitz

In recent times, globalization has been challenged by a rising number of phenomena with the power to disprove its utility. Globalization in all its dimensions, including economic, political, and cultural, has slowed down, and in some cases even regressed. The 2023 edition of the Freedom in the World Report, titled “The Global Expansion of Authoritarian Rule,” shows a consistent downward trend for 17 years, revealing a shift away from openness and toward a more closed world. We are currently in a phase of global sociopolitical cooling, which underscores the fragility of globalization theory. Moreover, the lines of conflict run within nations, not just internationally.

We are experiencing a turning point in time. And that means: The world after is no longer the same as the world before.
Olaf Scholz

In recent years, it has become increasingly clear that what were once thought to be minor setbacks in global development are in fact significant turning points. Since Putin’s aggressive military actions, the prevailing sentiment is that we are experiencing a *caesura* or “Zeitenwende” (“turn of the times”) – a phrase that was named Word of the Year 2022 by the Gesellschaft für deutsche Sprache (GfdS, Association for the German Language). The narrative of global cooperation through economic modernization has evaporated, and talk of a new Cold War, China’s increasing self-assurance, and a multipolar world with competing value systems is on the rise. The pressing question now is not only whether the West can continue to promote its values on a global scale, but also whether it can effectively defend its sphere of influence and uphold the principles of liberal democracy within its own borders.

The Caesura in the Monetary System: Is Fighting Inflation a Bluff?

Money and its narratives

First of all, money itself, just like the state and all its institutions, is basically fictitious: "*It is an imaginative complex that has a functional character because the entire framework of social recognition and authorization is built upon it.*"[48]

The sharp recovery in 1921 might be attributed to these new narratives, rather than to any active government stimulus to revive the economy.
Robert Shiller

A particular type of money gains its *functional character* in a community through the synchronization of individual expectations that it will find consistent acceptance in exchanges among people; ideally, both in the present, as a medium of exchange, and in the future, as a store of value. **However, how can the individual, the single economic subject, assume that this synchronization will persist over time and remain stable?**

I'm not upset that you lied to me, I'm upset that from now on I can't believe you.
Friedrich Nietzsche

The answer is that while there is no such thing as 100% certainty, individuals must rely on trust when it comes to money. The more trust placed in a specific form of money – i.e. the higher the trust capital is – the greater the likelihood of sustainable synchronization. Trust is an invaluable asset that cannot be overstated, and that's why it was the leitmotif of our *In Gold We Trust* report 2019. However, trust is also a "soft" asset, relying on the power of narratives. The table below showcases a selection of prominent forms of money and narratives that underpin them.

Money	Narratives critical to trust capital
Fiat money	The central bank's claims, which serve as backing for (central bank) money, are to be trusted. *Fiat money* is a legal instrument founded on the state's exclusive right to levy taxes and use force. Consequently, trust in the state is the linchpin. Central bankers are absolute professionals. Tax obligations are payable in fiat money; this has a coordinating effect. Everyone uses it and somehow it has been working for a while.
Gold[49]	Historically: Gold emerged as money in the course of spontaneous orders; it has proven to be the most stable form of payment in the past. Intrinsic consistency: physical durability, stable overall stock, i.e., high stock-to-flow ratio. Gold is liquid, even in stressful situations.
Bitcoin	The algorithm is good. Supply is limited/inelastic, as with gold. Bitcoin shares many of the advantages of gold, but it surpasses gold in practicality for daily transactions and accessibility while on the move. Bitcoin escapes government influence / government censorship. Its high energy consumption protects Bitcoin from manipulation.[50] Tesla and MicroStrategy invest in Bitcoin. Trust in the vision and leadership of Elon Musk and Michael Saylor is the anchor here.

The fiat currencies of the US dollar and the euro serve as vital pillars of Western economic power. It's therefore imperative that we scrutinize their current state. Given that trust in institutions and (monetary) policy actors is pivotal to their stability, we undertake a thorough investigation of this trust. What narratives serve as the bedrock for this trust, and which ones are showing signs of wear and tear? **What new narratives are taking shape, and how much power do they hold? We set out on a search.**

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48 *See* Koschorke, Albrecht et al.: *The Fictive State: Constructions of the Body Politic in the History of Europe*, 2007, p. 57, our translation
49 For an analysis of the narrative in gold, *see* "Gold in the Context of Portfolio Diversification", *In Gold We Trust* report 2016
50 *See* Taghizadegan, Rahim: "Bitcoin als Energiefresser?" ("Bitcoin as Energy Guzzler?", Finanz und Wirtschaft, August 6, 2021

Nixon's narrative accompanying strategy in the creation of the fiat money system

Richard Nixon ushered in the modern fiat money system with his famous televised speech on August 15, 1971:

> *"I have directed the Secretary of the Treasury to take the action necessary to defend the dollar against the speculators. I have directed Secretary Connally to suspend temporarily the convertibility of the dollar into gold or other reserve assets, except in amounts and conditions determined to be in the interest of monetary stability and in the best interests of the United States."*

As outlined in previous *In Gold We Trust* reports, this was a dodge by the then US president. The "Guns and Butter" policy pursued in the 1960s had led to a fiscal predicament and excessive money supply, which was recognized accordingly by the markets. The narrative emerged that the exchange rate of USD 35 per ounce of gold was unsustainable, and that the US dollar was experiencing a confidence crisis.

It is necessary for me to establish a winner image. Therefore, I have to beat somebody.
Richard Nixon

In a rhetorical move, Nixon flipped the narrative and laid the blame on nefarious speculators, whom he claimed were profiting from every crisis and now wreaking havoc on the mighty US dollar. Despite the US economy being unrivaled in strength, the dollar was floundering due to the malicious machinations of these malevolent manipulators. In a stroke of genius, Nixon shifted the focus from the actual cause of the crisis to these scapegoats, and promised a solution: unpegging the dollar from gold, which he claimed would restore stability and independence from the whims of speculators.

Furthermore, Nixon's announcement of a *temporary* suspension of convertibility may have averted a potentially catastrophic panic reaction or even a complete collapse of confidence, as he de facto unhinged the West from the Bretton Woods system, i.e. the postwar monetary order that had underpinned global economic stability.

In short, the fiat money system was the product of an emergency response. To bolster public trust in its efficacy, Nixon strategically formulated a robust counter-narrative.

Rehabilitation of confidence through successful inflation control

The 1970s were a period marked by turbulent economic events that have garnered renewed attention in recent times as analysts seek to gain insights into the contemporary economic landscape. Of note, OPEC implemented measures to restrict the supply of oil in the global commodity markets, resulting in a staggering surge in oil prices that set off a chain reaction culminating in a general escalation of prices.

Believe me when I say that how the Fed under Arthur Burns helped accommodate the LBJ "Great Society" spending binge in the late 1960s was going to unleash the inflation of the 1970s was on nobody's mind as the population lived in the moment and in the glory of the monetary boom…There are lags involved.
Dave Rosenberg

While decisive monetary policy interventions were imperative to alleviate the situation, the then-chairman of the Federal Reserve, Arthur Burns, initially believed that inflationary pressures, being driven by supply-side distortions, were temporary and beyond the purview of monetary policy. As a result, he refrained from taking immediate action, and this period of hesitation eventually led to an even more dire situation, with wage and price spirals fueling out-of-control inflation and a rapid depreciation of the US dollar. In a desperate effort to lower financing costs and tighten the supply of US debt, the United States even resorted to issuing bonds denominated in German marks and Swiss francs. **By the end of the late 1970s, the viability of the US dollar as a medium of exchange and store of value was seriously called into question.**

Enter Paul Volcker, the uncompromising successor to Burns. In a monetary policy tour de force, Volcker raised key interest rates to levels as high as 20%, triggering a severe recession in the process. Yet, it was this bold approach that finally brought the inflation crisis under control and restored confidence in a monetary policy committed to price stability.

However, Volcker's monetary policy strategy was not the only factor at play. Overlooked in today's comparative analyses is the role of political measures and economic developments in restoring stability to the US economy.

- First, the major energy companies had invested billions in new energy projects between the OPEC oil price shocks and Volcker taking office, expanding the supply of oil and contributing to the decline in oil prices in the early 1980s.
- Second, in 1981, President Reagan's decision to fire striking air traffic controllers weakened the unions and paved the way for future economic reforms.

I have abandoned free-market principles to save the free-market system.
George W. Bush

As we look to the present day, we find that central banks must navigate an entirely different set of challenges. In particular, ESG policies have significantly altered the investment landscape, with oil fields being one of the primary casualties – investment in oil fields has markedly declined in the recent decade. Thus, any conclusions drawn from previous crises must be taken with a grain of salt. Nonetheless, one key lesson endures: Central banks that are prepared to take decisive action, including raising interest rates and tolerating a temporary recession if necessary, can effectively manage inflation and restore confidence in both money and the monetary system.

The post-inflationary era and its narrative spawns

We did not abandon M1, M1 abandoned us.
Gerald Bouey (1983), Governor, Bank of Canada

The impact of the Volcker shock on the global monetary system was profound, but its effects on money multiplication were limited. Initially, attempts were made to guarantee price stability by expanding the money supply in line with the growth of the economy's production potential. However, the rise of globalization during this time period was accompanied by a surge in commercial bank money creation, which increasingly evaded the regulatory reach of central banks, causing them to lose control over the money supply in our two-tier monetary system. As a result, central banks shifted their focus away from money supply targets and towards *inflation targeting*, taking direct aim at consumer price inflation.

It doesn't matter whether a cat is black or white, as long as it catches mice.
Deng Xiaoping

However, the aftermath of the policy shift and the loss of control over the money supply was relatively subdued. The expansion of the money supply initially took place surreptitiously, largely unnoticed below the surface, and proved ineffective in affecting consumer prices, thanks to the structural changes wrought by globalization.

The liberalization of global capital movements and the integration of emerging markets into the world economy, followed by the inclusion of countries from the disintegrating Eastern bloc, ushered in an era of increased flexibility in the supply of goods and services across the globalized world. This structural shift resulted in a sustained downward pressure on wages and prices, rendering the once-ubiquitous quantity theory of money obsolete and effectively quelling inflation.

As for the Federal Reserve, it followed the narrative that a central bank should intervene to forestall recessions and bear markets and to cause consumer prices to inflate by an arbitrary 2% a year.
James Grant

Against this background, the era of the *Great Moderation* can be understood. Alan Greenspan, who took over the Federal Reserve's chairmanship from Volcker in 1987, was able to keep emerging distortions in the financial markets in check throughout his twenty-year tenure by deploying monetary injections and stimulating interest rates, thereby remedying the usual cyclical fluctuations. However, in the aftermath of crises, interest rates were not raised again sufficiently and the liquidity created was not collected again – which was only possible because consumer price inflation wasn't occurring. Central banks around the globe adopted a similarly lopsided approach.

As a result of this so-called *Greenspan put*, the narrative of *intelligent central bank management* emerged, positing that the Federal Reserve had overcome the traditional business cycle with the help of "novel monetary policy techniques."[51]

Monetary tectonics: latent problems of monetary expansion and overindebtedness

The expansion of the money supply smoothed out the crises on the surface while nurturing problematic developments beneath it. Recessions and financial crises manifested with a lesser degree of severity than would have been anticipated under normal circumstances. However, problematic dynamics with eruptive potential have roiled beneath the surface – for which we

[51] Mayer, Thomas: *Die neue Ordnung des Geldes: Warum wir eine Geldreform brauchen (The New Order of Money: Why We Need Monetary Reform)*, 2014, p. 213

once coined the metaphor of *monetary tectonics*.[52] The latent unfavorable developments include:

- **Partial abolition of the liability principle**[53]: Banks and speculators were bailed out by monetary policy and thus encouraged to behave in an irresponsible, more risk-taking manner (moral hazard, *Greenspan put*).
- **Artificial inflation of asset prices and overindebtedness:** In addition to a widening of the wealth gap between rich and poor due to loose monetary policy, this has created a bubble which, if allowed to deflate by means of rising interest rates, threatens to trigger an all-encompassing downward economic spiral.
- **The ECB's euro rescue policy with its *whatever it takes* narrative:** It aims at saving the euro by means low interest rates and securities purchases. Yet, this approach merely defers the thorny question of whether the eurozone should dissolve or become a complete debt and transfer union. Furthermore, TARGET2 balances[54] have skyrocketed to levels beyond measure, but the ECB has reassured that these balances are "no cause for concern."
- **Sclerosis in the capital structure:** Economies became more inefficient as the smoothing of crises saved unproductive companies that further tied up resources.

[T]he suspicion that behind this measure [quantitative easing, continued securities purchases by the ECB] lies an intent to protect heavily indebted governments from a rise in interest rates is becoming increasingly well founded.
Memorandum on the ECB's monetary policy (4.10.2019)

Recent decades have seen the implementation of so-called rescue measures, which have significantly increased the system's vulnerability to crises. The prevailing low interest rates have led to a dependency on them across the entire system, with economic actors such as firms, organizations, and individuals envisioning themselves in a post-inflationary era. In the United States, rising interest rates could potentially trigger a stock market crisis and further jeopardize the already fraught social contract; while in Europe higher inflation rates could force the ECB into a dilemma between saving the euro, which would necessitate low interest rates, and combating inflation, which would call for high interest rates.

Alas, those who have sounded the alarm about such unwanted outcomes have been summarily labeled as *crash prophets* and their narrative of a frail system written off as invalid and unworthy of serious consideration.

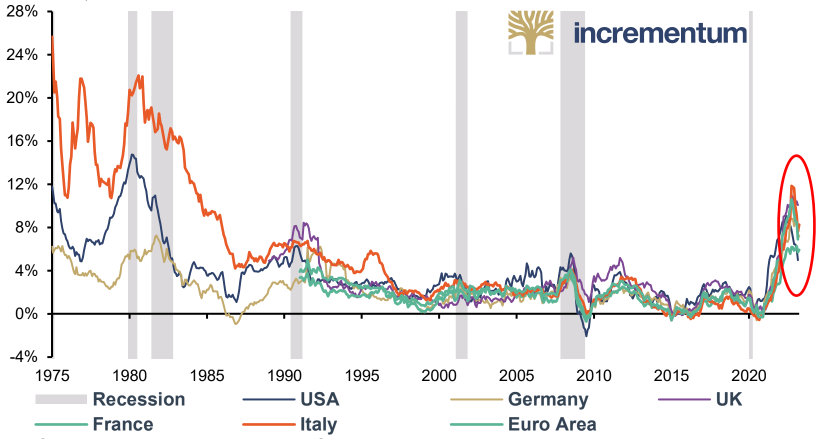
The current situation's potential for being a monetary caesura

The *zero interest rate trap*[55], a term encompassing the various processes we have listed above, remained latent for a long time, masking a mounting problem that would eventually lead to a critical juncture. **For many years, governments and central banks were able to meander through this precarious landscape, dodging an acute crisis.**

[52] *See* Stöferle, Ronald et al.: Austrian School for Investors: Austrian Investing between Inflation and Deflation, 2014
[53] *See* Eucken, Walter: *Grundsätze der Wirtschaftspolitik*, 1990, p. 279 ff.
[54] In mid-March, Target2 was replaced by a new large-value payment system known as *T2*.
[55] *See* Stöferle, Ronald et al.: *The Zero Interest Rate Trap*, 2019

However, recent developments have rendered the post-inflationary-era narrative obsolete, as consumer price inflation, with all its distortions and inequities, has once again reared its head and become a daily reality in much of the Western world. If deflation was the primary concern of central banks in the recent past, it is now inflation that has re-emerged as a formidable adversary. The notion of a world free of inflation is no longer tenable, akin to the flawed notion of Fukuyama's *end of history*.

CPI, yoy, USA, Germany, UK, France, Italy, and HCPI, yoy, Euro Area, 01/1975-04/2023



Source: Reuters Eikon, Incrementum AG

After initial attempts at denial – "*The inflation is temporary*"; "*The inflation profile resembles a hump*"; "*The ECB cannot combat the rise in energy prices*"; "*There is nothing the ECB can do about the Covid-19 crisis*"; "*Inflation is a phenomenon of the VAT increase*"; "*This is Putin's inflation*" (Joe Biden) – which evoked memories of Arthur Burns and the 1970s, the topic was then taken seriously by the central banks after all. The Federal Reserve reacted with a decisive gesture, and the ECB followed suit by initiating its first interest rate hikes.

Let us assess the central bankers' strategy. A key aspect in the beginning was to prevent second-round effects by containing inflation expectations through appeasing narratives.

The Federal Reserve and its overseas counterparts, by muscling long-term bond yields lower and lower, indeed, not stopping even at zero percent, will supposedly make the world richer and safer. Or so says the 21st-century narrative. Better, perhaps, the one about thrift, self-reliance and laissez-faire.
James Grant

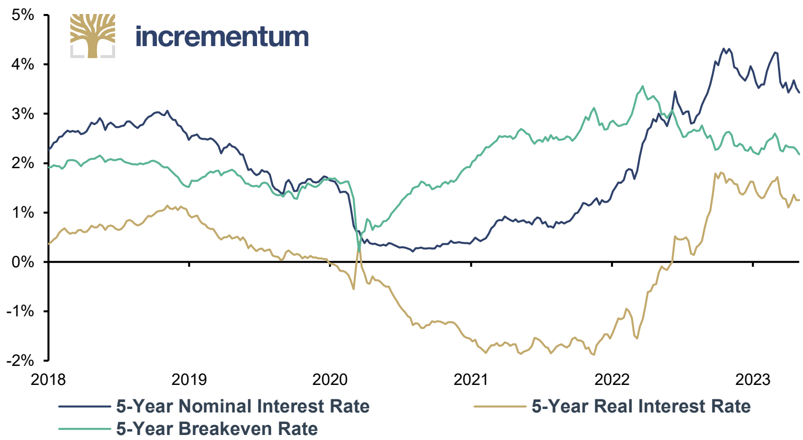
However, in response to mounting public concern and accusations of indecision, central banks have undergone a fundamental shift in their approach to inflation. Their previous stance of cautious appeasement has given way to an image of unwavering determination to combat rising prices. **Jerome Powell has taken on the role of hardliner, invoking the legacy of Paul Volcker in his uncompromising approach to fighting inflation, even at the risk of disrupting the economy and financial markets.** This show of resolve is exemplified in the significant interest rate hikes of 0.75 percentage points on multiple occasions, as well as in statements made through *forward guidance* – which is more or less the institutionalized instrument for setting the narrative.

But what is the origin of this newfound resolve among central bankers? Presumably, they have noticed that the markets and the public have developed a growing perception that the bankers are constrained in their ability to effectively address inflation, rendering them unable to implement decisive measures. Indeed, the notion that central banks have painted themselves into a corner with their policies over the past few decades is no longer confined to the ramblings of obscure financial pundits. It has seeped into the mainstream, to the extent that even a group of former central bankers felt compelled to issue a memorandum in 2019, stating: "*[T]he suspicion that behind this measure [quantitative easing, continued securities purchases by the ECB] lies an intent to protect heavily indebted governments from a rise in interest rates is becoming increasingly well founded*."

You know, if baseball umpires were on the front page of the sports section every week, you'd know something was desperately wrong with the game.
Jim Grant, on central bankers

So, central bankers faced the daunting task of counteracting the spreading belief that they were impotent in their fight against inflation. It is evident that confidence plays a crucial role for stable money, as previously explained. If the public were to become convinced of central banks' inability to combat rising prices, confidence would suffer a substantial blow. Therefore, the recent assertiveness of central bankers can be understood as a symbolic move aimed at presenting an alternative narrative that suggests their capacity to address inflation. They have articulated their belief that the measures they have implemented will return inflation rates to the customary level of approximately 2% in the foreseeable future. The present yield differentials between nominal and inflation-indexed bonds on the US bond markets suggest that this narrative is gaining traction.

5-Year Interest and Breakeven Rates, USA, 01/2018-05/2023



Source: Federal Reserve St. Louis, Incrementum AG

Presumably, central bankers are flexing their muscles in a show of force, determined to extinguish the flames of inflation as quickly as possible. The underlying assumption being that the system can withstand short-term spikes in interest rates, given that bonds will be gradually rolled over, thus not causing immediate harm to government budgets. However, the pressing question is whether central banks can emerge victorious in the fight against rising prices, when structural forces such as deglobalization, decarbonization, and demography – the three *D*s – fuel the flames of inflation.[56]

But the real question will be whether the central banks can win the fight against inflation in a sprint, in view of the structural inflation drivers. Thomas Mayer of the Flossbach von Storch Research Institute is unequivocal in his assessment: "*What matters is the marathon*".

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56 *See* Flossbach, Bert: "Dreimal ‚D' – und die Preise steigen" ("Three Times 'D' – and the Prices Rise", November 9, 2021

Summary

Payments are a public good that is simply too important to be left to the market.
Christine Lagarde, 2022

The stability of the fiat money system is under threat as the confidence it depends on is eroded by the relentless expansion of the money supply. To restore public faith, monetary policymakers have resorted to using narratives (or perhaps even bluffs) as a strategic tool to rekindle investor confidence. During the 2008 financial crisis, then-German Chancellor Angela Merkel likely prevented a potential bank run or even a systemwide meltdown by issuing an audacious yet substantively questionable statement: "*We tell savers that their deposits are safe*." Similarly, in 2012, Mario Draghi invoked his now-legendary "*Whatever it takes*" catchphrase to stave off an impending euro crisis.

Money is too important to be left to central bankers.
Milton Friedman, 2002

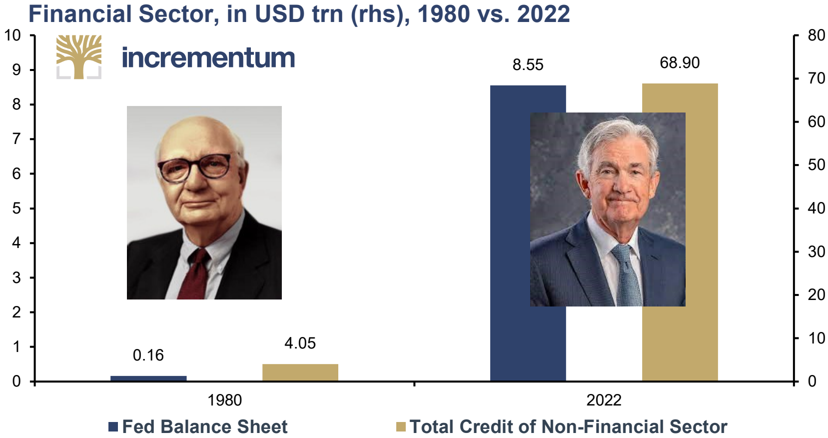
Today, however, inflation, the long-forgotten foe, has unexpectedly resurfaced, casting a pall over the current economic climate. The absence of inflation had lulled the public into a sense of complacency, leading to reckless overindebtedness. But now that inflation has returned, consumer prices are expected to soar in the long run.

That there will be a rise in interest rates, for example, and that that rise in interest rates will have unpredictable consequences, that can actually be said with some certainty right now.
Harold James

Presently, central banks are adopting aggressive *whatever it takes*-style rhetoric to convey their commitment to combatting inflation. However, should persistently elevated inflation rates necessitate a sustained increase in interest rates, it may become apparent that such a course of action cannot be reconciled with Draghi's *whatever it takes* statement; the possibility of an inherent conflict between fighting inflation and maintaining the stability of overindebted states, companies, and markets must be carefully considered, not only within the Eurozone but across the global economy. **Consequently, a showdown of narratives could emerge.**

As previously discussed, Volcker's approach not only involved raising interest rates to over 20% (a level that is presently a long way off) but also took advantage of a positive economic and political context characterized by an upsurge in oil production and the enfeeblement of labor unions. In contrast, the current scenario appears less favorable due to the underinvestment in the oil sector driven by ESG concerns, as well as intensifying labor shortages. Last but not least, when comparing Volcker and Powell, it is vital to consider the following illustrative figures from the United States:

Fed Balance Sheet, in USD trn (lhs), and Total Credit of Non-Financial Sector, in USD trn (rhs), 1980 vs. 2022



Source: Federal Reserve St. Louis, Incrementum AG

Courtesy of Hedgeye

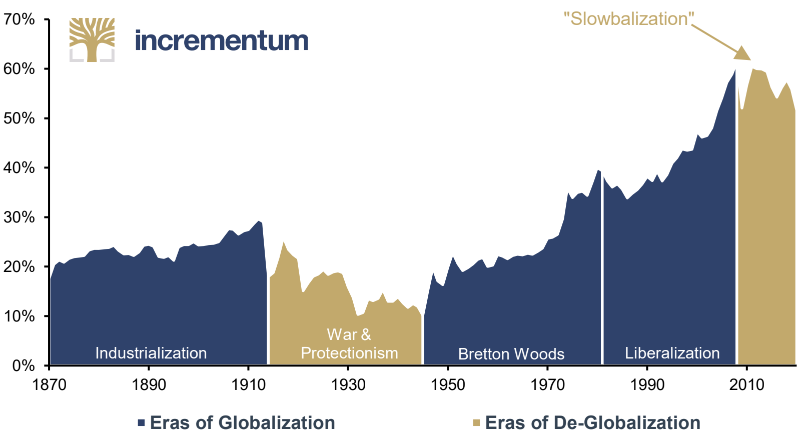
This revelation uncovers the fragile state in which the current monetary system finds itself. Should any of the narratives falter in the face of a worsening inflation crisis, confidence may begin to wane. This, as we stated in the opening of this chapter, puts at risk the crucial asset that underpins fiat money.

Conclusion

The real economic struggle between the US and China may not be fought out over trade or technology, but end up as a monetary war.
Charles Gave

When Norman Angell wrote *The Great Illusion* and the whole world believed in the impossibility of war, globalization was at a temporary peak. The chart below reveals that in 1913, the share of world trade in global output had exceeded 10%. However, the onset of World War I and other significant crises that followed resulted in a protracted period of globalization recession. It was only with the inflation crisis of the 1970s that the pendulum began to swing back in the other direction, and for the first time since the pre-war era, globalization surged past its 1913 peak.

Trade Openess Index, 1870-2020



Source: IMF, Klasing and Milionis (2014), OECD, Penn World Table, World Bank, ourworldindata.org, Incrementum AG

The subsequent decades have witnessed a sweeping wave of globalization that has left an indelible mark on the world, as extensively discussed in this chapter. **The**

era of the *Great Moderation* that typified the recent decades was characterized by:

- low inflation
- stable, low economic growth
- low macroeconomic volatility compared with previous decades.

The attainment of this outcome was the result of the convergence of multiple formidable forces, each powerful in its own right:

- globalization in the sense of offshoring to low-wage countries
- deregulation
- technological revolutions
- increasing debt
- demographics
- a trend toward "financialization" – away from the real economy
- the collapse of the Soviet Union, which led to a Pax Americana, and
- a huge increase in the supply of raw materials from the former Soviet Union, a previously largely inaccessible source.

Many of the forces that propelled the wave of globalization in recent decades are now weakening or even reversing course. The world is in an economic war (US vs. China) and a hot war (Russia vs. Ukraine, and NATO by proxy). As a result, global supply chains have been dealt a severe blow. This is likely to result in a new epoch marked by heightened inflation and macroeconomic volatility.

The pessimist sees difficulty in every opportunity. The optimist sees opportunity in every difficulty.
Winston Churchill

Some hope, on the other hand, is offered by economic historian Prof. Dr. Harold James, who in October 2022 presented his latest work, *Shock Moments: A World History of Inflation and Globalization 1850 to the Present*, which identifies and analyzes seven globalization crises since 1850. In this seminal work, he distinguishes between demand crises, such as the *Global Financial Crisis* beginning in 2007, and supply crises, such as the oil crisis in the 1970s and the current crisis, noting that the latter crises always increase sensitivity to international supply patterns. While the current discussions revolve around reshoring, friend-shoring, one-sided dependencies, and supply chain restructuring or diversification of supply sources, James notes that these discussions are not new: Similar concerns were raised as early as the 1970s. In the past, however, supply crises have always been major drivers of the globalization process, as the realization always prevailed that, in the face of shortages, it was more advisable to look for more sources of supply worldwide.

When fundamentally new things happen in the world, we face a conundrum.
Joseph Schumpeter

According to James' analysis, the current protectionist reflex may not ultimately determine the fate of the world. Nevertheless, he anticipates an epochal shift on the horizon. According to his view, future globalization will deviate significantly from its course recent decades. The forthcoming era will likely be characterized by a heightened focus on technological advancement and the integration of the intangible-goods *weightless economy*. The impact of elevated energy prices, as long as they remain unimpeded by artificial restrictions, will drive an increased demand for energy-efficient products and processes. History has demonstrated that globalization crises have the potential to generate considerable learning opportunities – in this sense, they serve as "shocks against complacency".

The most important reason why civilizations go from high morale and strong consensus to pessimism and division is moral entropy.
William Ophuls

The years ahead will be marked by a host of formidable challenges. The crisis of globalization, geopolitical unrest, domestic social upheavals in Western countries, and a looming monetary crisis that threatens to trigger a profound financial crisis all demand that policymakers deftly navigate the course ahead, in order to enable the West to remain competitive and to defend its cherished model. An overhaul of the monetary system may be imperative to achieve this, for loose monetary policies have led us astray, creating a situation where the wealthy have disproportionately benefited while the prospects of social mobility through hard work and education have dwindled.

The error of optimism dies in the crisis, but in dying it gives birth to an error of pessimism. This new error is born not an infant, but a giant.
Arthur Pigou

And what is the West, anyway? Despite challenges to the Western narrative, such as resurgent Russian ambitions in Ukraine, the allure of Western ideals and values endures. As Ukraine resists the Russian invasion driven by the myth of resovietization, it draws strength from its belief in once being part of the West. This crisis serves as a wake-up call for the Western community to undertake a process of introspection and redefine itself, entailing a critical appraisal of its own shortcomings and a re-imagination of its civilizational program – the latter of which requires an intensive effort of narrative construction. To achieve this, the West must not only learn from the corrosive developments of recent years but also formulate a strategy for reorganizing and rehabilitating its monetary system. Only then can it continue to carry its civilizational program into the world and embody the vision eloquently articulated by Stefan Kolev in the *Frankfurter Allgemeine Zeitung*: *"In a nutshell, the West, in terms of economic policy, can be understood as an order that constantly fights against entrenched privileges of the elite, aiming to establish equitable access to the state, economy, and society for all."*

Crack-Up Boom – The End of a Currency Regime

A breakdown occurs. The crack-up boom appears. Everybody is anxious to swap his money against "real goods", no matter whether he needs them or not, no matter how much money he has to pay for them.

Ludwig von Mises

- **The term *crack-up boom* has been trending in the financial media recently.**
- **The expression gained fame after Austrian School economist Ludwig van Mises wrote about it in his famous treatise *Human Action*.**
- **The most prevalent symptoms are hyperinflation in consumer prices and uncontrolled stock market rallies as a flight into real values takes place. Other side effects are disruptions in supply chains and a seizure of the loan markets.**
- **The end result is typically the loss of trust in a currency, its failure, and the subsequent emergence of a new one.**
- **Examining all currencies currently in circulation, their average lifespan as of 2023 amounts to approximately 74 years. In comparison, the life of an average S&P 500 company is much shorter, standing at 18 years as of today.**
- **With the invention of Bitcoin, we are now witnessing a live experiment in monetary invention.**

Thy money perish with thee.
ACTS 8:20

The term *crack-up boom* has been trending in the financial media in recent years. Impelled by unconstrained inflation and lofty stock price levels, learned investors sought past historical orientation via analogues with the World War II period as well as the 1970s. The term *crack-up boom* actually has its origin in academic treatises by the Austrian School economist Ludwig von Mises, but it is certainly relevant to the current global economic environment.

Money Is a Societal Institution – with all the Weaknesses of Human Nature


Photo Credit: Wikipedia

As has been highlighted in great detail in previous *In Gold We Trust* reports, money is a societal institution serving an economic function, allowing us to obtain the things we need and want in a specialized world. Money is after all uniquely human and it *"allows humans to structure life in incredibly complex ways that were not available to them before the invention of money"*.[57] Thus, the introduction of the usage of coins in ancient Lydia almost three thousand years ago, paving the way for the emergence of a mercantile market system, sparked a revolution.

What began in commerce quickly spread to all other areas of life from politics to religion to academics as the use of numbers and of counting propelled a new level of rationalization in human thought. And even though the Lydian kingdom under Croesus disappeared after its conquest by Cyrus the Great, the new money system prevailed and was a key factor that made possible the classical civilizations of the Mediterranean. The next quantum leap in the history of money was triggered by invention of banking and paper money in the banks of Renaissance Italy, facilitating the capitalist economy as we know it today, while most recently the invention of electronic money added a further dimension to money as a societal institution.

> **Chocolate as Currency**
> Cacao beans emerged as the primary medium of exchange during the Aztec Empire (1400 AD). In fact, chocolate became so valuable that it was counterfeited by criminals who hollowed out cacao beans and filled them with mud. Cacao was a highly prized commodity in Mexico and Central America which could be traded widely or consumed. Its value was based on the local cultural context because when the first European pirates seized a cargo of cacao beans, "they mistook the cacao beans for rabbit dung and dumped the entire cargo in the sea" (Weatherford). It is often forgotten that currencies can also share beauty (gold) or taste (chocolate) in addition to their economic features of trust, divisibility, portability and standardization.

[57] Weatherford, Jack: *The History of Money – From Sandstone to Cyberspace*, Crown Publishers Inc., 1997, p 43

Photo Credit: Christoph F. Siekermann

During those 3000 years in the history of money, not only did human culture undergo profound transformations but multiple currency regimes appeared and disappeared. The longest-serving currency in use today is by far the British pound at about 1200 years, albeit at the cost of significant devaluation. While in 1257 one fine ounce of gold stood at GBP 0.89,[58] today its price is above GBP 1500. The second and third oldest currencies in circulation, unknown to many, are the Russian ruble and Serbian dinar, both in use since the 13th century. Over the centuries both the ruble and the dinar have undergone numerous devaluations and revaluations. Comparatively young in comparison is the US dollar, which was introduced in 1792 under the Coinage Act passed by the US Congress. The Swiss Franc is even younger, being introduced in 1850 by the first Federal Coinage Act of the new Swiss Federal Constitution. Still in its infancy is the euro, which was launched only in 1999 by the European Central Bank. Nevertheless, since then its currency has devalued by 85% when measured against gold. **In other words, the price of gold in euro terms has increased by 555% since the euro's inception.**

1 EUR, in mg of Gold, 01/1999-05/2023

Source: Reuters Eikon, Incrementum AG

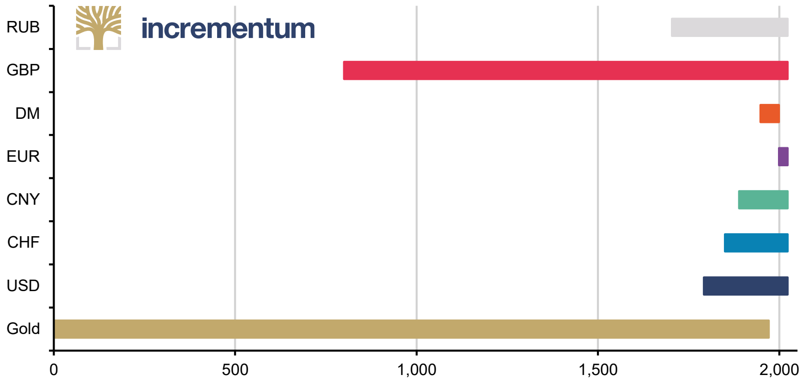
Most Currencies Are very Young

Paper money eventually returns to its intrinsic value – zero.
Voltaire

The realization of how short-lived most currency systems are leads us to the question of how and why a currency system will not only emerge but, more importantly, end. For some time, an internet meme circulated that the average lifespan of a fiat currency amounted to only 27 years. However, as critics pointed out, this was taking into account only currencies that are no longer in circulation. Examining all currencies currently in circulation, their average lifespan as of 2023 amounts to approximately 74 years (own calculation). In comparison, the life of an average S&P 500 company is much shorter, standing at 18 years as of today.

[58] Weale, Martin: "1300 Years of the Pound Sterling", *National Institute Economic Review*, No. 172 (2000): 78–89, p. 78

Lifespan of Various Currencies, 0-2023



Source: Wikipedia, Incrementum AG

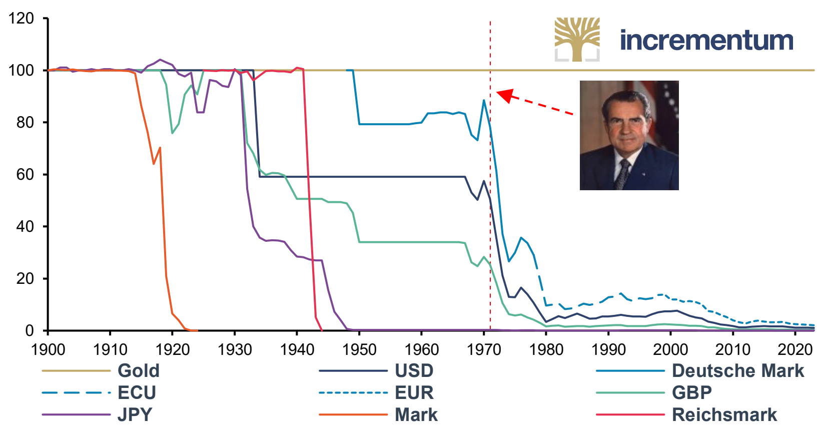
A photographer kneels on a street littered with invasion money, Rangoon, 1945.
Photo Credit: Wikipedia

Regarding the end or "death" of a currency, three scenarios come to mind. First, it may occur upon conquest by a foreign power, whose currency is subsequently imposed. One example for this is the so-called Japanese invasion money, officially known as Southern Development Bank Notes, which was introduced to occupied countries by Japan during World War II. Or a currency may die through the introduction of a new currency due to political reasons such as the advent of the euro, which replaced the existing currencies in the participating countries of the newly established currency union, including the German mark, the Italian lira, and the French franc. Lastly, perhaps the most infamous scenario is currency failure, most often in the form of hyperinflation.

The dollar is our currency but your problem.
US Treasury Secretary John Connally, 1971

Currency, whether composed of paper cash, coins, or an electronic ledger, is simply an ephemeral form of money of money that is popular and useful in a location for a limited period of time. Gold and silver are money, too, but they are of a different sort, often referred to as metallic standards. All currencies are finite, and some have had very short life spans**. With the invention of Bitcoin and other cryptocurrencies, we are now witnessing a live experiment in monetary invention, and it will be interesting to observe how it will play out over the course of the next decades.**

Gold and Various Currencies Measured in Gold, 1900-2023



Source: World Gold Council, Reuters Eikon, Incrementum AG

As per Wikipedia, a currency is "*a standardization of money in any form, in use or circulation as a medium of exchange, for example banknotes and coins*" or more generally, "*a system of money in common use within a specific environment over time, especially for people in a nation state*". Since 1978 the International Organization for Standardization (ISO) has published ISO 4217, a standard encompassing every world currency by means of the ISO 4217 Currency Code.

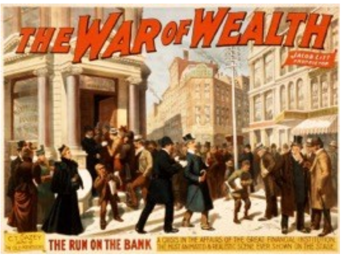
Monetary stability is a necessary and sufficient condition of financial stability.
Brendan Brown

One great advantage of money is its function as of a generally accepted unit of account. Economic calculation, encompassing everything that is exchanged against money, becomes possible. Thus, prices of goods and services became denominated in money, either units of gold and silver or the prevailing currency. Today, all prices are denominated in fiat currencies – the euro, US dollar, pound sterling , yen – with the US dollar serving as the reference value for all other currencies. In his *What Has Government Done to Our Money*, Murray Rothbard pointed out, "*Money [currency] does not measure prices or values; it is the common denominator for their expression. In short, prices are expressed in money [currency], they are not measured by it*".

The world is rushing towards chaos and doesn't notice.
Arthur Feiler (1920)

If a currency becomes too volatile or loses trust in its redeemable value, it can no longer serve as money. To fulfill its economic function as a medium of exchange, unit of account and store of value, a currency necessarily needs to have a minimum level of trust and stability. Today, most central banks in their role of issuers of respective national currencies, have adopted a technique called *inflation targeting,* with a depreciation target of 2%. This 2% target is widely considered to be low enough in volatility and implied trust (against depreciation or counterfeiting) to keep the currency viable as a form of money. However, when the inflation rate rises over 2%, it becomes difficult for economic actors to make productive and rational decisions, and central banks may fear a bank run on their national currency.

Hyperinflation – The Failure of a Currency



A poster for the 1896 Broadway melodrama The War of Wealth depicts a 19th-century bank run in the U.S.
Photo Credit: Wikipedia

Plenty of examples exist, however, of currencies failing their prescribed function sooner or later. The most extreme examples fall into the category of hyperinflation, whose initial definition, by Phillip Cagan, is still widely used: "*[B]eginning in the month before the monthly rise in prices exceeds 50 per cent and ending in the month before the monthly rise in prices drops below that amount and stays below for at least a year*".[59] A monthly inflation rate of 50% is equivalent to an annual rate of 12,975%. For reference, the annual inflation rate at the end of 2022 was 64% in Turkey, 95% in Argentina, 156% in Venezuela, and 244% in Zimbabwe.

[59] Cagan, Philip: "The Monetary Dynamics of Hyperinflation", in: Friedman, M. (Ed.): *Studies in the Quantity Theory of Money*, The University of Chicago Press, Chicago, 1956, pp. 25-117, p. 25

The trouble with paper money is that it rewards the minority that can manipulate money and makes fools of the generation that has worked and saved.
Adam Smith

Steve H. Hanke, Professor of Applied Economics at John Hopkins University, has further refined Cagan's definition of hyperinflation as "*inflation in which the inflation rate exceeds 50% per month for at least thirty consecutive days*". Based on this refined definition, Hanke and Nicholas Krus created the so-called *Hanke-Krus hyperinflation table*. This was first published in 2013;[60] as of January 2023, it comprises the following episodes:

The Hanke-Krus Hyperinflation Table

Nation	Month with highest inflation rate	Highest monthly inflation rate	The prices double each
Hungary	Jul 1946	$4{,}19 \times 10^{16}$%	15.0 Hours
Zimbabwe	Mid-Nov 2008	$7{,}96 \times 10^{10}$%	24.7 Hours
Yugoslavia	Jan 1994	313000000%	1.41 Days
Republika Srpska	Jan 1994	297000000%	1.41 Days
Germany	Oct 1923	29500%	3.70 Days
Greece	Oct 1944	13800%	4.27 Days
China	Apr 1949	5070%	5.34 Days
Free state Danzig	Sep 1923	2440%	6.52 Days
Armenia	Nov 1993	438%	12.5 Days
Turkmenistan	Nov 1993	429%	12.7 Days
Taiwan	Aug 1945	399%	13.1 Days
Peru	Aug 1990	397%	13.1 Days
Bosnia Herzegowina	Jun 1992	322%	14.6 Days
France	Mid-Aug 1796	304%	15.1 Days
China	Jun 1945	302%	15.2 Days
Ukraine	Jan 1992	285%	15.6 Days
Poland	Oct 1923	275%	16.0 Days
Nicaragua	Mar 1991	261%	16.4 Days
Congo (Zaire)	Nov 1993	250%	16.8 Days
Russia	Jan 1992	245%	17.0 Days
Bulgaria	Feb 1997	242%	17.1 Days
Moldova	Jan 1992	240%	17.2 Days
Venezuela	Apr 2018	219%	17.9 Days
Russia / USSR	Feb 1924	212%	18.5 Days
Georgia	Sep 1994	211%	18.6 Days
Tajikistan	Jan 1992	201%	19.1 Days
Georgia	Mar 1992	198%	19.3 Days
Argentina	Jul 1989	197%	19.4 Days
Zimbabwe	Oct 2017	185%	20.1 Days
Bolivia	Feb 1985	183%	20.3 Days
Lebanon	Jun 2020	170%	20.9 Days
Belarus	Jan 1992	159%	22.2 Days
Kyrgyzstan	Jan 1992	157%	22.3 Days
Venezuela	Apr 2020	151%	22.6 Days
Kazakhstan	Jan 1992	141%	24.0 Days
Austria	Aug 1922	129%	25.5 Days
Bulgaria	Feb 1991	123%	26.3 Days
Uzbekistan	Jan 1992	118%	27.0 Days
Azerbaijan	Jan 1992	118%	27.0 Days

[60] Hanke, Steve H. and Krus, Nicholas: „World Hyperinflation", in: Parker, Randall and Whaples (Hg.): T*he Handbook of Major Events in Economic History*, 2013, pp. 367–377. Steve Hanke and John Greenwood were probably the first ones, by using the Quantity Theory of Money, to accurately forecast where inflation was going to go in the United States. On July 20, 2021, they wrote in "Too Much Money Portends High Inflation" that "the year-over-year inflation rate will be at least 6% and possibly as high as 9%". They were pretty close. The peak was 9.1% per year. Tehy also got the downside. In their February 14, 2023 op-ed, "High Inflation Will End Soon," they used the Quantity Theory of Money, a theory that has been cancelled by Powell and the Federal Reserve, to conclude that "we think inflation is knocking on death's door and a recession may be on the way." Also, they put, as they always do, specific numbers on our forecast. They concluded that the year-over-year inflation rate would fall to between 2% to 5% by the end of 2023. They could be the only ones that have put numerical values on a forecast, a forecast that looks like it's going to hit the bullseye.

Congo (Zaire)	Nov 1991	114%	27.7 Days
Peru	Sep 1988	114%	27.7 Days
Taiwan	Oct 1948	108%	28.9 Days
Hungary	Jul 1923	97.90%	30.9 Days
Chile	Oct 1973	87.60%	33.5 Days
Estonia	Jan 1992	87.20%	33.6 Days
Angola	May 1996	84.10%	34.5 Days
Brazil	Mar 1990	82.40%	35.1 Days
D.R. Congo	Aug 1998	78.50%	36.4 Days
Poland	Jan 1990	77.30%	36.8 Days
Armenia	Jan 1992	73.10%	38.4 Days
Tajikistan	Nov 1995	65.20%	42.0 Days
Latvia	Jan 1992	64.40%	42.4 Days
Turkmenistan	Jan 1996	62.50%	43.4 Days
Philippines	Jan 1944	60.00%	44.9 Days
Yugoslavia	Dec 1989	59.70%	45.1 Days
Germany	Jan 1920	56.90%	46.8 Days
Kazakhstan	Nov 1993	55.50%	47.8 Days
Lithuania	Jan 1992	54.00%	48.8 Days
Belarus	Aug 1994	53.40%	49.3 Days
Taiwan	Feb 1947	50.80%	51.4 Days

Source: Hanke, Steve H., Nicholas Krus, Incrementum AG

The more the money supply grows, the more likely it is that there will be hyperinflation and a potential breakdown of money demand: the unfolding of a crack-up boom."
Ludwig von Mises

The most egregious current example of hyperinflation is found in Zimbabwe, where consumer price inflation reached 285% year-on-year in August 2022 but had fallen to a tidy 75% by April 2023. Venezuela, Argentina, Turkey, and Lebanon might also come to mind when thinking about hyperinflation environments; however, as of 2023 their rates lie below 50% and thus do not meet the criteria of Cagan and Hanke. Nevertheless, people in those countries are facing huge challenges due to the ongoing devaluation of their currencies. In the case of Lebanon, the Banque du Liban (the central bank of Lebanon) repegged the value of the Lebanese pound against the US dollar at the opening of 2023, thus devaluing the currency by about 90%. Yet, this new exchange rate is still far off the black-market rate, by which many people in the country trade and calculate.

Money, like chocolate on a hot stove, was melting in the pockets of the people.
Ludwig von Mises

Notably, all of the above examples, occurred in the presence of discretionary paper money regimes and were caused by government budget deficits that were financed by excessive currency creation.[61] However, the final trigger of an unconstrained accelerating inflation rate is adverse political and societal conditions, rather than the absolute level of credit creation.

The Crack-Up Boom

The advantages of holding cash must be paid for by sacrifices which are deemed unreasonably burdensome.
Ludwig von Mises

The Austrian School of Economics is particularly well known for their research into money and price theory. Thus, it should come as no surprise that Ludwig von Mises bears responsibility for coining the moniker *crack-up boom*, or *Katastrophenhausse* in German, although earlier mentions of the German expression can be found, such as for example in Moriz Dub's 1922 article "Die weitere Entwicklung der Katastrophenhausse in Oesterreich mit Streiflichtern auf Deutschland" ("The further development of the catastrophe boom in Austria

[61] Bernholz, Peter: *Monetary Regimes and Inflation – History, Economic and Political Relationships*, Edward Elgar, 2003, pp. 19, 69, 73

with spotlights on Germany").[62] Mises, having lived through the crisis years of the 1920s and 1930s in Austria, which were similar but prior to the developments in Weimar Germany, was deeply aware of the distortionary effects of the artificial provision of money and credit to the economy. The 100-year anniversary of the German hyperinflation this year could be reason enough on its own to reinvestigate the topic.

When a nation is running to decay and ruin, the merchant, and monied man, do what you can, will be sure to starve last.
John Locke

Artificially inflating the supply of money will result in a drop in interest rates, misleading investors to invest in projects that appear profitable even though they are not. As banks continue to pour credit into the economy, prices and wages as well as asset prices will rise, giving the false impression of strong economic growth. At the same time, the inherent problem of misallocated capital persists. The longer the credit expansion lasts, the greater the distortions in the overall economy become. Unprofitable business ideas are pursued, and nonproductive individuals are rewarded. **In today's terms, we would speak of the *zombification* of the economy.**

What´s lighter than the mind? A thought. Than thought? This bubble world. What, than this bubble? Nought.
Francis Quarles, 1634

Contrary to most economists, scholars in the tradition of the Austrian School of Economics consider the artificial boom triggered by central banks' downward manipulation of interest rates as a worrisome process of bringing an economy out of balance, while the ensuing recession is the unavoidable process of returning the economy into balance. **This wave-like development of the economy must not be confused with secular growth, which depends on the quantity of real savings available in an economy.**

Any real growth in the capital stock takes time and requires voluntary net savings. There is no way for the expansion of the money supply in the form of bank credit to short-circuit the process of economic growth.
Moss & Vaughn

Various scholars have written about the consequences of this distortion. They all arrive at the same conclusion: Sooner or later the correction will come. It will certainly come once the credit expansion is no longer accelerating any further and market participants begin to struggle to service their debt. When the private misallocations of capital become exposed, oftentimes government attempts to intervene by bailing out companies and keeping the credit expansion going through quantitative easing, i.e., outright purchase of bonds, or credit easing, the loosening of the financing conditions for commercial banks. Amongst the most recent examples are the Targeted Long Term Financing Operations (TLTRO) of the ECB, with the explicit goal of "*preserving favorable borrowing conditions for banks and stimulating bank lending in the real economy*". The unwillingness of both private and government actors to acknowledge an investment loss leads to an absurd level of credit expansion. The expansion continues with the reckless printing of money until the entire economic system collapses in a crack-up boom.

While Mises clearly has brought fame to the moniker *crack-up boom,* his definition was somewhat vague, placing the phenomenon in the context of a rapid fall of purchasing power triggered by credit expansion and resulting in a flight into real goods: "*The monetary system breaks down; all transactions in the money concerned cease; a panic makes its purchasing power vanish altogether*".

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[62] Dub, Moriz: "Die weitere Entwicklung der Katastrophenhausse in Oesterreich mit Streiflichtern auf Deutschland" ("The further development of the catastrophe boom in Austria with spotlights on Germany"), in: *Finanz- und Volkswirtschaftliche Zeitfragen*, Heft 80, 1922

He realized well that the abundance of money makes everything dear, but he did not analyze how that takes place. The great difficulty of this analysis consists in discovering by what path and in what proportion the increase of money raises the price of things.
Richard Cantillon

Thus, and contrary to common assumptions, for Mises the crack-up boom really described the overall breakdown of the economy caused by "*the panic of the currency catastrophe*", which goes far beyond the panic rally on stock markets, although this constitutes one of the various *symptoms* of the currency breakdown. In Weimar Germany, the government even had to respond to the ensuing chaos by issuing a "state of siege". In general, the ceasing of the functioning of the economy can be observed in the following areas:

- **Loan markets:** Interest rates rise rapidly, well above any level of entrepreneurial investment.
- **Asset price boom:** Inflation of asset prices surges above any historical performance levels of cash-flow.
- **Supply chains:** Seizure of B2B transactions, the supply chains stop functioning, and intermediate goods become scarce.
- **Consumer prices:** runaway inflation causing disorientation (hyperinflation).

American Union Bank, New York City, April 26, 1932.
Photo Credit: Wikipedia

Hyperinflation is the easiest symptom of the breakdown of the currency system to observe and measure. Published consumer prices are much easier to observe than supply chain disruptions, scarcity of intermediate goods, and loan denial. Furthermore, everyone holding the currency is directly exposed to hyperinflation. Therefore hyperinflation is the most common financial symptom associated with a crack-up boom, but it is clearly not the only economic symptom.

Murray Rothbard described the resulting behaviour as follows:

> *"A frantic rush ensues to get rid of money at all costs and to buy anything else. In Germany, this was called a 'flight into real values'. The demand for money falls precipitously almost to zero, and prices skyrocket upward virtually to infinity".*

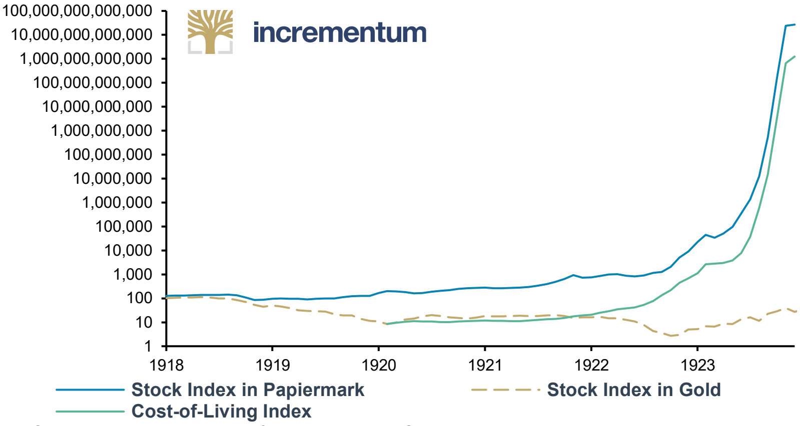
Since the beginning of time, the flow of people to the stock exchange has not been as strong and extended to all circles as it is now. The big profits always attract new crowds of buyers and spread the view that it has to stay like this forever.
Moriz Dub (1922)

At this stage, "*the increase in the quantity of money causes a fall in the demand for money*", as Mises explained in his magnum opus *Human Action*. This also indicates the loss of trust in the currency. As a further consequence of the rapid fluctuations in prices, other forms of exchange, such as barter, begin to fulfill the former role of the dead currency. Oftentimes, other currencies will be adopted as substitute currencies.

The second most associated symptom of a crack-up boom is probably the explosion of asset prices – in particular stock prices – and the term *crack-up boom* is used to denote precisely those astronomical and sky-rocketing price increases, although Mises used the expression to encompass the overall breakdown of the currency system.

The development of the German equity index in the 1920s is infamous. It increased from roughly 100 at the beginning of the year 1918 to 26,890,000,000,000 at the end of 1923. Notably, when measured against gold, the German equity index, in the run-up period to the hyperinflation as well as in its initial phase (until autumn 1922), lost value in real terms, and only increased again in the later course of the hyperinflationary destruction of the paper mark.

Stock Index in Papiermark & Gold and Cost-of-Living Index, 01/1918-12/1923



Source: Wikipedia, DigiZeitschriften, Incrementum AG

Paper wealth has multiplied while genuine wealth has stagnated.
Edward Chancellor

To give a specific example, the stock of Siemens-Schuckert (since 1966 Siemens AG) stood at 216 as of July 25, 1914. By September 1921 it had increased to 4,650, and only a few weeks later, at the end of November 1921, it had reached 14,000. In US dollar terms, however, the valuation of the stock remained almost unchanged.[63]

The tendency of an inconvertible paper money is to create fictitious wealth, bubbles, which by their bursting, produce inconvenience.
Lord Liverpool

The search for value drives asset prices up, fueled by fear and despite a dire economic environment. Contemporary witness reports of the runup to the German hyperinflation are highly illustrative. Notable are the descriptions of Moriz Dub, who already in 1920, in the aftermath of World War I, had observed an inverted correlation between the devaluation of the currency and the stormy upward movements on the German and Austrian stock exchanges.[64] Only two years later, he attested a further intensification of what he described as a "peculiar dynamic". In particular, he emphasized the general interest in stock market movements, a generally low disposition towards saving, a scarcity of goods, and a redistribution of wealth within society from the poor to the rich.

Depositors clamor to withdraw their savings from a bank in Berlin, 13 July 1931
Photo Credit: Wikipedia

These observations perfectly herald the German hyperinflation – or crack-up boom – of 1923. While in 1914 the US dollar was valued at 4.20 German Reichsmarks, by 1922 the Reichsmark had declined to only 1/1000 of its prior value, before, in November 1923, trading at 4.2 billion Reichsmarks to the US dollar. Behind this absurd and disastrous devaluation of the currency was the Reichsbank, then the German central bank, which acceded to the clamor for ever more money in response to the accelerating prices.

[63] Dub, Moriz: "Die weitere Entwicklung der Katastrophenhausse in Oesterreich mit Streiflichtern auf Deutschland" ("The further development of the catastrophe boom in Austria with spotlights on Germany"), in: *Finanz- und Volkswirtschaftliche Zeitfragen*, Heft 80, 1922, p. 10
[64] Dub, Moriz: "Die weitere Entwicklung der Katastrophenhausse in Oesterreich mit Streiflichtern auf Deutschland" ("The further development of the catastrophe boom in Austria with spotlights on Germany"), in: *Finanz- und Volkswirtschaftliche Zeitfragen*, Heft 80, 1922, p. 7

The discovery which shattered their society was that the traditional repository of purchasing power had disappeared, and that there was no means left of measuring the worth of anything. For many, life became an obsessional search for Sachwerte.
Adam Fergusson

Reichsbank director Rudolf Havenstein explained the ever-growing pressure the Reichsbank faced in running its currency printing press absolutely at capacity:

> *"The wholly extraordinary depreciation of the mark has naturally created a rapidly increasing demand for additional currency, which the Reichsbank has not always been able to fully satisfy. A simplified production of notes of large denominations enabled us to bring ever greater amounts into circulation. But these enormous sums are barely adequate to cover the vastly increased demand for the means of payment, which has just recently attained an absolutely fantastic level, especially as a result of the extraordinary increases in wages and salaries. The running of the Reichsbank's note-printing organization, which has become absolutely enormous, is making the most extreme demands on our personnel."*[65]

Bresciani-Turroni described the feverish situation with the German stock exchange:

> *"It was in the autumn of 1921 that business on the German Bourse reached such a condition as to put in the shade even the classical examples of the most violent fever of speculation. The technical equipment of the German exchanges was insufficient for the increasing mass of transactions."*

And Moriz Dub observed: "*In the price sheets we find shares which have remained without yield for years and yet have the highest ratings. Imagination takes the place of calm calculation.*"[66]

'I think the market is very appealing, and prices are low,' said Keynes. And where is the crash coming from, in any case?' The crash will come from the gap between appearances and reality. I have never seen such stormy weather gathering; I said.
Felix Somary

Less obviously visible is how an unpredictable, risky environment sooner or later affects credit markets and private lenders of money, who become more and more cautious, demanding higher interest rates, provided they are still willing to lend at all. Even Karl Marx noted that "*The rate of interest reaches its peak during crises, when money is borrowed at any cost to meet payments*". **As a result the loan and capital markets will shrink in volume and duration**, further harming the already weak economy. For example, in Germany in 1922 "*a scarcity of the means of payment began to be felt […] Deposits in the banks diminished rapidly because of the progressive depreciation of German money. That obliged the banks to restrict credits*". In another example, during the hyperinflation in Argentina in the 1980s, credit markets with a duration longer than 14 days simply ceased to exist.[67]

The disruptions and frictions can persist in the economy for a long time. As Mises explains,

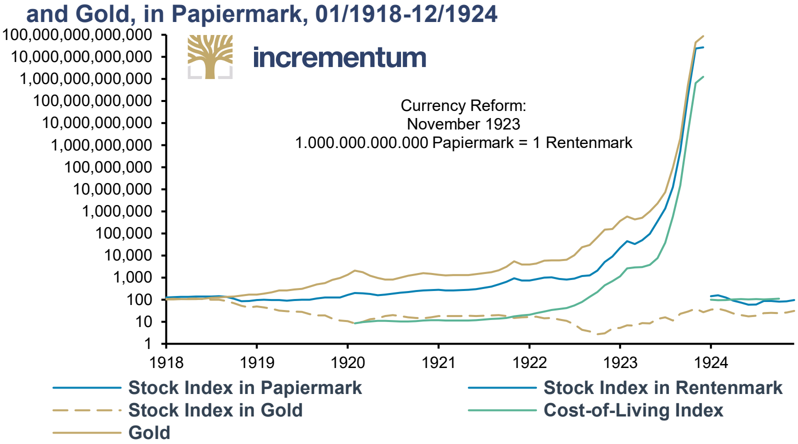
> *"The wavelike movement affecting the economic system, the recurrence of periods of boom which are followed by periods of depression, is the*

[65] Havenstein, Rudolf: "Address to the Executive Committee of the Reichsbank, August 25, 1923", translated in: Ringer, Fritz K. (ed.): *The German Inflation of 1923*, New York: Oxford University Press, 1969, p. 96
[66] Dub, Moriz. 1922, *Die weitere Entwicklung der Katastrophenhausse in Oesterreich mit Streiflichtern auf Deutschland*, S 6 in: Finanz- und Volkswirtschaftliche Zeitfragen, Heft 80, 1922, Verlag von Ferdinand Enke in Stuttgart
[67] Bernholz, Peter: *Monetary Regimes and Inflation – History, Economic and Political Relationships*, Edward Elgar, 2003, p. 93

unavoidable outcome of the attempts, repeated again and again, to lower the gross market rate of interest by means of credit expansion. There is no means of avoiding the final collapse of a boom brought about by credit expansion. The alternative is only whether the crisis should come sooner as the result of a voluntary abandonment of further credit expansion, or later as a final and total catastrophe of the currency system involved."

However, once a threshold is reached, the *crack-up boom* ensues. Everybody is anxious to swap his money against "real" goods, no matter whether he needs them or not, no matter how much money he has to pay for them. Within a very short time, within a few weeks or even days, the things that were used as money are no longer viable as media of exchange. They become scrap paper. Nobody wants to give away anything against them.

Stock Index in Papier-, Rentenmark & Gold, Cost-of-Living Index and Gold, in Papiermark, 01/1918-12/1924



Source: Wikipedia, DigiZeitschriften, Incrementum AG

Conclusion

The inflation can continue only so long as the conviction persists that it will one day cease. Once people are persuaded that the inflation will not stop, they turn from the use of this money. They flee then to "real values," foreign money, the precious metals, and barter.
Ludwig von Mises

Money is a societal institution, facilitating human interaction and collaboration. Currencies, in the form of coins and paper bills, as well as deposit money, constitute the most widely used form of money today. However, their eligibility for artificial credit expansion makes the economies in which they operate highly vulnerable to the resulting economic distortions, such as volatile prices, interrupted supply chains, and dried-up markets. Eventually, too-great distortions will impede the functioning of the economy. This, then, is the crack-up boom. The most commonly observed symptom of the crack-up boom is its monetary expression, hyperinflation, although there are many other forms of economic malaise, such as a seizure of the credit and investment markets and disruption of supply chains of goods and services. **The end result is typically the loss of trust in a currency, its failure, and the subsequent emergence of a new one.**

The boom is built on the sands of banknotes and deposits. It must collapse.
Ludwig von Mises

According to Mises, throughout the early stages, the path towards a crack-up boom can still be abandoned by stopping all further credit expansion and allowing for self-correction of the distortions in the economy. Otherwise, "hitting rock bottom" can only be postponed but not avoided. On a more positive note, as the Manchester banker John Mills pointed out so perceptively, *"As a rule, panics do not destroy capital, they merely reveal the extent to which it has previously been destroyed by its betrayal into hopelessly unproductive work"*.

Gold is always accepted and is the ultimate means of payment and is perceived to be an element of stability in the currency and in the ultimate value of the currency, and that historically has always been the reason why governments hold gold.
Alan Greenspan

Despite the recent surge in awareness of the potential for a crack-up boom, it still needs to be highlighted that current inflation rates, albeit elevated, lie far below the dangerous territory of what is considered hyperinflation. At the same time, however, there is observable friction in our monetary set-up, and more challenges likely lie ahead. This was even acknowledged by the IMF in its January 2023 World Economic Outlook Update: "*The balance of risks remains tilted to the downside…[…] the global economic outlook has deteriorated materially*".

Showdown in Sound Money

No one says that gold is an abstractly "perfect" money, whatever that may be. It is far more trustworthy, however, than government... Unfortunately, now that the last vestiges of the gold standard are gone, the Fed has the power to create more money indefinitely; and so long as we continue to allow them to retain such power, they will continue to use it, with disastrous results.

Murray Rothbard

- **There exists a considerable amount of tension between gold investors and Bitcoin enthusiasts, who frequently engage in disputes, demeaning each other's preferred asset.**
- **The concept of intrinsic value is a point of contention between critics and supporters of Bitcoin, but the subjective preferences of individuals ultimately determine the value of an asset.**
- **Bitcoin may at this stage be considered money by only a small minority, but it has certainly gained some kind of "moneyness" if we take Hayek's approach and view *money* as an adjective.**
- **While gold has physical properties that make it valuable, Bitcoin has unique digital properties that offer advantages such as low transaction costs and the ability to transfer wealth quickly over long distances.**
- **Bitcoin and gold are complementary, not competitive, as stores of value. Each has unique advantages and limitations. Investors should educate themselves and consider a diversified mix of noninflatable monetary assets as integral to their portfolios.**

Gold vs. Bitcoin

Gold investors have been advocating, explaining, and crusading for sound-money principles for over a century, bearing the brunt in the fight against fiat currency and central bank exuberance. Again and again, we have been vocal in our criticisms of the prevailing monetary system, to put it mildly.[68] Even so, in the late 2000s it appeared as though sound-money principles had been defeated, and the gold community was left with a sense of hopelessness.

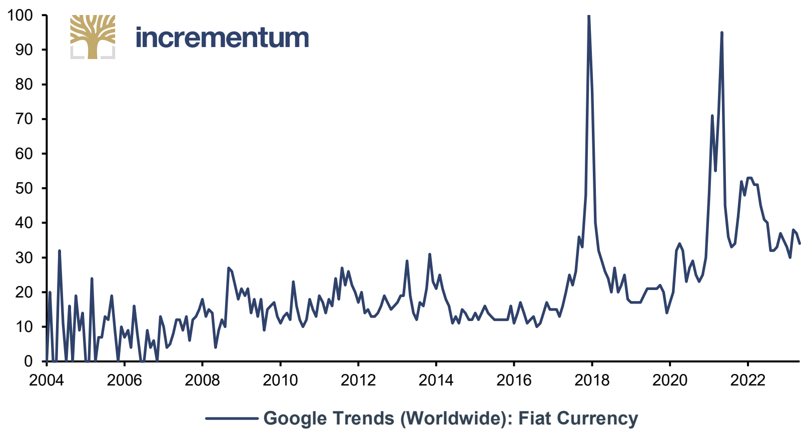
Friedrich August von Hayek
Photo credit: Wikimedia

In 2009, Satoshi Nakamoto appeared out of nowhere with a revolutionary new technology. In a "sly, roundabout way", he introduced something that governments could not stop – as had been prophesied by Nobel prize-winning economist Friedrich Hayek in 1984:

> *"I don't believe we shall ever have a good money again before we take the thing out of the hands of government, that is, we can't take it violently out of the hands of government, all we can do is by some sly roundabout way introduce something that they can't stop."*

Bitcoin has brought a fresh wave of interest to the sound-money community and has attracted a new generation of supporters. The term *fiat currency* was barely known ten years ago. Thanks to the invention of Bitcoin and the rise of cryptocurrencies, an entire generation has been nudged into asking some very fundamental questions about money. It seems that especially during the last two cryptocurrency manias, the interest in debating and questioning fiat currency was ignited, as Google searches suggest.

Google Trends (Worldwide): Fiat Currency, 01/2004–05/2023



Source: Google, Incrementum AG

Came for the profit, stayed for the principal.
Robert Breedlove

This alone should be hailed by everyone who is sincerely interested in reinstalling sound money in the future. However, the response from many gold investors has been to not only reject Bitcoin but to campaign against it, accusing it of being a scam, a speculative bubble, the new Tulip Mania.

[68] *See* for example: "From risk-free returns to return-free risk", *In Gold We Trust* Classic; "The monetary system at the crossroads", *In Gold We Trust* Classic

Despite the fact that Bitcoin and gold are complementary assets with their own unique value propositions, **some gold investors remain closed off to the potential of Bitcoin and unwilling to embrace it as a new form of sound money**. This has led to a backlash from the Bitcoin community, with some members taking an aggressive stance towards gold. As a result, an intellectual "civil war" has arisen in the sound-money community; and today, many gold investors and Bitcoin enthusiasts hold extreme opinions about the opposing asset.

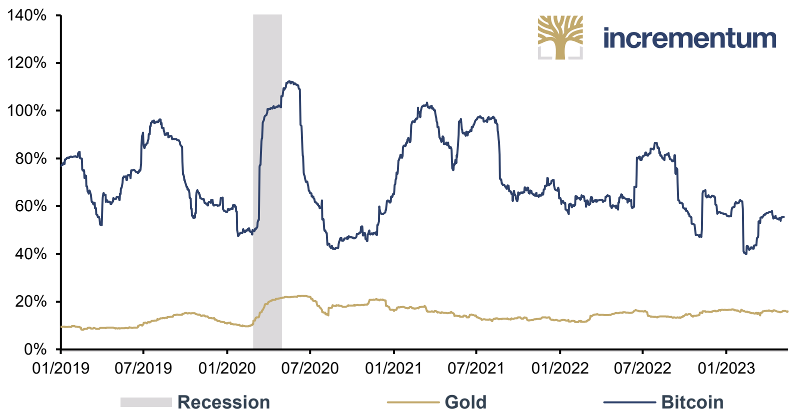
Every informed person needs to know about Bitcoin, because it might be one of the world's most important developments.
Leon Luow

In this chapter, we will examine the origins of the rift between the gold and Bitcoin communities and the reasons for the division. We have been following Bitcoin for over 10 years now and have had an annual feature in our *In Gold We Trust* report for the past seven years, as we consider Bitcoin to be a groundbreaking monetary invention that we expect to continue to gain significant relevance. We therefore want to address some of the misconceptions that gold investors hold regarding Bitcoin, and vice versa, thereby highlighting the positive aspects of both assets. Ultimately, we aim to strengthen our case for investing in both assets and to bridge the gap between the two communities.[69] **Our hope is that this article can contribute towards harmony and collaboration within the sound-money camp.**[70]

The bugs vs. the maxis

Gold investors often hold a negative opinion of Bitcoin, for various reasons. One key factor is their perception of its being a speculative investment rather than a safe-haven asset. Bitcoin's price is in fact highly volatile and has seen significant fluctuations in a short period of time, which may deter investors seeking stability.

Gold and Bitcoin, 90D Annualized Volatility, 01/2019-05/2023



Source: Reuters Eikon, Incrementum AG

It's gold for nerds.
Stephen Colbert

In addition, gold has established itself as a store of value over a long history, whereas Bitcoin is a relatively new asset, and its long-term value is uncertain. Moreover, some gold investors may perceive Bitcoin as a threat to the traditional precious metals market, and as a result may be biased against it.

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69 See "In Bitcoin We Trust?", *In Gold We Trust* Classic
70 *See* "Gold and Bitcoin: Stronger Together?," *In Gold We Trust* report 2019; "Crypto: Friend or Foe?," *In Gold We Trust* report 2018

Property	Gold	Fiat currencies	Bitcoin
Fungibility	moderate/high	high	high
Transferability	moderate	high	high
Longevity	high	moderate	?
Anonymity	high	high (cash) low (digital)	moderate
Non-monetary utility	high	–	–
Scarcity	moderate/high	low	high
Decentralization	moderate	low	high
Volatility	moderate	low	high
Energy intensity – Creation	high	low	high
Energy intensity – Usage	low	high	high

Upon closer examination of the writings of Satoshi Nakamoto, we find that he mentions gold several times. In fact, he references gold in the Bitcoin White Paper, a 3,219-word document that outlines what Bitcoin is and how it operates: "*The steady addition of a constant amount of new coins is analogous to gold miners expending resources to add gold to circulation. In our case, it is CPU time and electricity that is expended*."

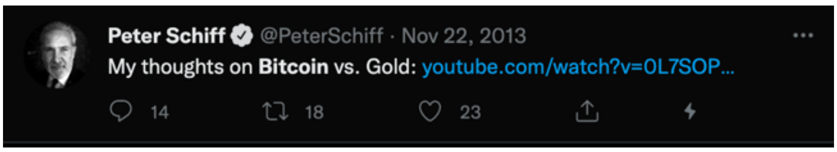
Imagine if gold turned to lead when stolen.
Satoshi Nakamoto

Based on this quotation, it could be reasonably argued that Satoshi had a good understanding of gold, and it is clear that **he endeavored to digitally emulate the supply characteristics of gold, and even modelled the concept of Bitcoin mining on gold mining.**

Also, it is almost certainly no coincidence that he dates his birth as April 5, the day former US President Franklin D. Roosevelt issued Executive Order 6102, which prohibited private ownership of gold in the US.

I can't understand why people are frightened of new ideas. I'm frightened of the old ones.
John Cage

The starting point of a broader discussion within the gold community about Bitcoin may be traced back to the year 2013. Peter Schiff, a well-known character within the English-speaking gold community, published the very first Tweet about Bitcoin: a link to a video, outlining his thoughts about Bitcoin vs. gold:



In this video, he starts off by explaining Bitcoin (quite well) in what sounds like a positive light. Then, at the 2:30 mark, Peter starts to explain why Bitcoin can "never be money": "*Bitcoin has all the properties, except the most important one. Without that property, gold would never have been money. I'm talking about value. Intrinsic value of the metal itself. You see … Bitcoin doesn't have any*."

He then goes on to explain his concept of intrinsic value and mentions Ludwig von Mises' regression theorem. The first shots in the sound-money showdown had been fired. Since then, Mr. Schiff and many other gold investors have grown increasingly vocal in their dislike of Bitcoin.

Revisiting the regression theorem

Bitcoin isn't a real asset. It's an intangible token that will only have a market price until the bubble pops and greater fools are no longer willing to buy.
Peter Schiff

The *regression theorem* was first proposed by Ludwig von Mises in 1912 in *Die Theorie des Geldes und der Umlaufmittel* (*The Theory of Money and Credit*). We wrote about the regression theorem in 2011. It has been a thorn in the side of Bitcoin since the cryptocurrency's inception, with the theorem being wielded not only by gold investors but by the Austrian economic community in general. It is widely used by Bitcoin sceptics in the following context*:* For something to be money, it first needs to have value beyond its monetary value; therefore Bitcoin can never evolve to being money. We prefer this interpretation by Hans Hermann Hoppe:

> *"Any type of money must initially be a commodity money, traded in barter, because only then do people have an idea of what the initial purchasing power of this commodity is. Then, additional purchasing power is added to it as this commodity is also demanded for the first time as a medium of exchange."*

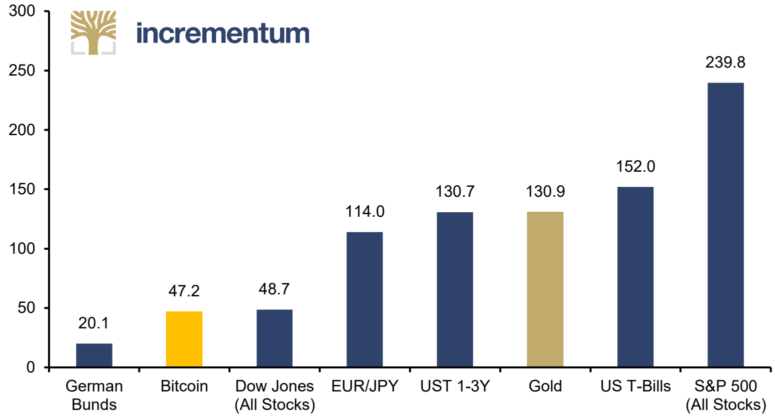
The first Bitcoin transaction was a barter for pizza. After that, people bought and traded Bitcoin for many years without considering it a form of money. Critics of course don't consider Bitcoin to be a form money even now, but it undoubtedly has a market value. One could argue that Bitcoin is either still in the "pre-money" stage, as described by Mises in the regression theorem, and could still become money; or it is already a form of money. An insightful thought by Friedrich Hayek from his book *Denationalization of Money* is quite helpful in this regard:

> *"I have always found it useful to explain to students that it has been rather a misfortune that we describe money by a noun, and that it would be more helpful for the explanation of monetary phenomena if 'money' were an adjective describing a property which different things could possess…"*

Gold trades $145 billion/day (WGC) whereas Bitcoin trades $40 billion/day (on-chain, CME Futures and crypto exchanges). Bitcoin and gold are the two most liquid alternative assets in the world.
Charlie Morris

We would argue that Bitcoin in fact has gained some kind of moneyness already. Expanding on that thought, one can revert back to Carl Menger, who defined money as the asset with the highest *saleablity*. Although saleability is not the exact same thing as liquidity, the liquidity of any monetary asset may actually be quite a good hint as to the degree of "moneyness" of any given asset. **We therefore want to compare the liquidity of Bitcoin, gold, and short-term US Treasury bills to put these three assets into relation.**

Average Daily Trading Volumes, in USD bn, 2021



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

The intrinsic value dispute

It's a bubble. It has to have intrinsic value. You have to really stretch your imagination to infer what the intrinsic value of Bitcoin is. I haven't been able to do it. Maybe somebody else can.
Alan Greenspan

We will now argue that the notion that Bitcoin, or any asset for that matter, lacks intrinsic value is incompatible with Austrian economic theory both theoretically and empirically. In fact**, the term *intrinsic value* itself is quite problematic if one takes seriously the principles of Austrian Economics, going back to Carl Menger**. Ludwig von Mises, in his seminal work *Theory and History*, expounds upon the subjectivity of value and dedicates several chapters to this topic. A cursory review of his writings serves as a timely reminder that the concept of value is entirely dependent on the subjective preferences of the individual:

> *"All judgments of value are personal and subjective. There are no judgments of value other than those asserting 'I prefer, I like better, I wish'. It cannot be denied by anybody that various individuals disagree widely with regard to their feelings, tastes, and preferences and that even the same individuals at various instants of their lives value the same things in a different way. In view of this fact it is useless to talk about absolute and eternal values.*
>
> *This does not mean that every individual draws his valuations from his own mind. The immense majority of people take their valuations from the social environment into which they were born, in which they grew up, that moulded their personality and educated them. Few men have the power to deviate from the traditional set of values and to establish their own scale of what appears to be better and what appears to be worse.*
>
> *What the theorem of the subjectivity of valuation means is that there is no standard available which would enable us to reject any ultimate judgment of value as wrong, false, or erroneous in the way we can reject an existential proposition as manifestly false."*

All value is subjective.
Carl Menger

Although the subjectivity of economic value is irrefutable, **the real underlying problem that gold enthusiasts possibly fail to articulate correctly is Bitcoins' lack of industrial utility or in a broader sense its lack of physicality**.

One of gold's most important characteristics for investors is the ability to hold the metal in their hands. Bitcoin does not possess this property. **In fact, according to Bitcoin's creator, Satoshi Nakamoto, physicality is gold's greatest weakness**, which enables governments and other aggressors to confiscate gold, and is the basis for gold's low salability across space. Precisely the lack of physicality enables the users of Bitcoin with a different kind of utility that can be fundamentally useful hence valuable. Bitcoin was created in order to overcome gold's weakness, as Satoshi Nakamoto explained on the Bitcointalk forum:

> *"As a thought experiment, imagine there was a base metal as scarce as gold but with the following properties:*
> *- boring grey in colour*
> *- not a good conductor of electricity*
> *- not particularly strong, but not ductile or easily malleable either*
> *- not useful for any practical or ornamental purpose*
>
> *and one special, magical property:*
> *- can be transported over a communications channel".*

...it's more typical of a precious metal. Instead of the supply changing to keep the value the same, the supply is predetermined and the value changes. As the number of users grows, the value per coin increases. It has the potential for a positive feedback loop; as users increase, the value goes up, which could attract more users to take advantage of the increasing value.
Satoshi Nakamoto

However, absent any industrial utility, there are many practical instances where Bitcoin can be highly useful to individuals. For instance, Bitcoin could be used when people urgently have to leave their current location and are unable to carry physical gold as a store of their wealth to their new destination. One very practical example are refugees who likely would be stripped of their savings in gold while on the run. These people could relocate without this risk if they could store their keys on an electronic device or even just remember their seed key. Another example is Bitcoin's advantage of low transaction cost and high speed of the transfer of wealth over long distances.

Even if one prefers to stick to the concept of *intrinsic value* – which we would be very critical about – a reasonable argument can be made that the unique properties of Bitcoin ***do* provide intrinsic value, not as a function of the physical properties of the asset, but as a function of its unique digital properties.**

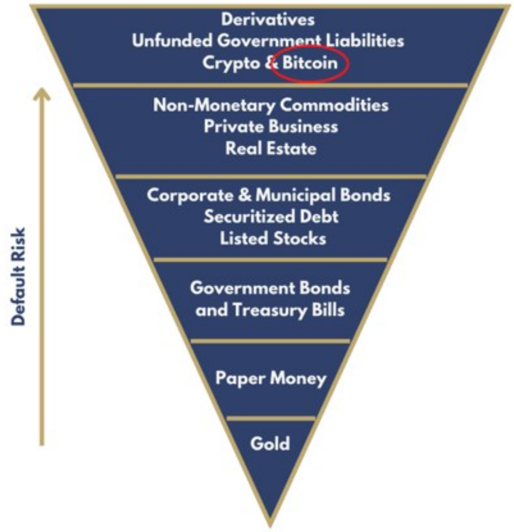
Bitcoin and Crypto

Bitcoin is the best crypto-asset. There is no second best crypto-asset.
Michael Saylor

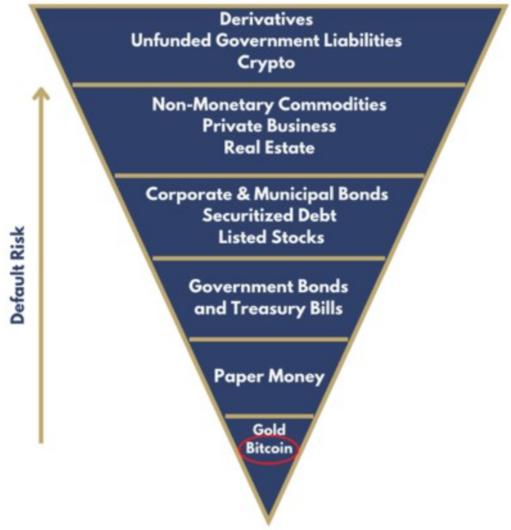
In order to understand why Bitcoin's digital properties are so unique, it is crucial to understand the difference between Bitcoin and *crypto* generally. **Bitcoin critics often conflate Bitcoin with the wider crypto space.** This is, in our opinion, a massive divider between gold investors and Bitcoiners, as illustrated below. **We wrote about Exter's pyramid in detail in the *In Gold We Trust* report 2019.**[71] The radical difference in views about where Bitcoin belongs on

[71] "The Enduring Relevance of Exter's Pyramid," *In Gold We Trust* report 2019

Exter's pyramid could explain the tensions between gold investors and Bitcoiners. **Note that Bitcoiners consider crypto (other than Bitcoin) as highly risky and volatile.**



Where Bitcoin critics place Bitcoin on Exter's pyramid



Where Bitcoin enthusiasts place Bitcoin on Exter's pyramid

The opinion of a mainstream commentator regarding why Bitcoin is better than other cryptocurrencies, might be akin to this: *Bitcoin is widely regarded as the first and most well-known cryptocurrency. It has a large and established network, with a long history of secure transactions and a solid track record of stability and reliability. Additionally, it has a large and active community of developers, investors, and users who have all helped to ensure its continued success. These factors make Bitcoin a more attractive investment option than altcoins, which may not have a strong community, network, or track record.*

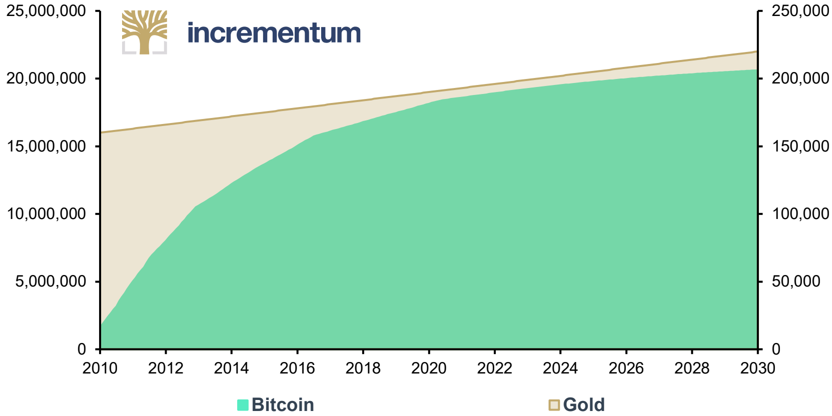
Gold is bitcoin without electricity.
Charlie Morris

What is often overlooked is that Bitcoin was created with the explicit aim of replacing the current, trust-based currency system. No other notable cryptocurrency attempts to achieve this. Regardless of what other cryptocurrency projects claim their use case to be, none of them are attempting to be Bitcoin or even come close to replicating Bitcoin's unique features and capabilities.

In a time of abundance, Bitcoin taught me what real scarcity is.
Gigi

One of these features is Bitcoin's stock-to-flow ratio, which is currently in line with that of gold. In a sense, Bitcoin can be viewed as digital gold, while other cryptocurrencies can be compared to countless other resources, each with its own possible use case, or not.

Bitcoin Stock (lhs), in Coins, and Gold Stock (rhs), in Tonnes, 01/2010–01/2030



Source: blockchain.com, World Gold Council, Incrementum AG

One of the most significant aspects that sets Bitcoin apart from other cryptocurrencies is its decentralization. While many cryptocurrencies are managed by a central organization or group of individuals, Bitcoin is entirely decentralized. This means that there is no central authority controlling the currency, and every user has an equal say in the network's operation.

Nothing made me more suspicious of Bitcoin than the rapidity with which I was convinced of it.
Ijoma Mangold

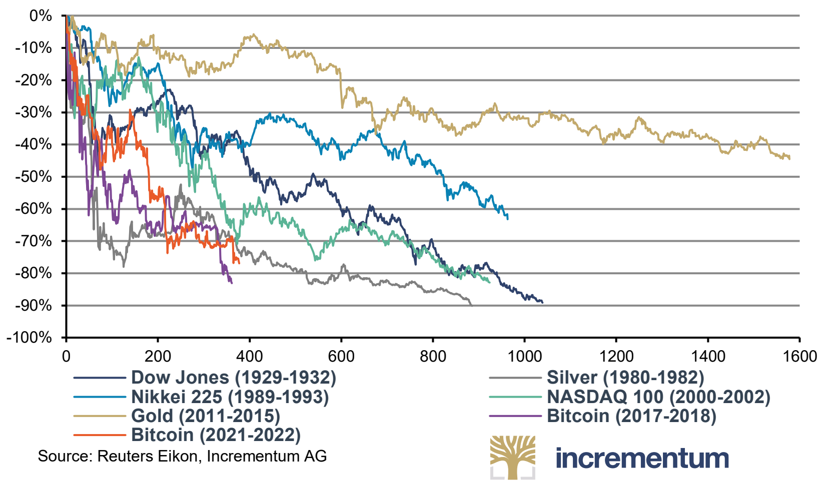
Bitcoin's decentralization has several advantages over other cryptocurrencies and traditional currencies. It is more resistant to fraud and hacking attempts, as there is no central point of control for hackers to compromise. Additionally, the lack of a central authority means there is no entity that can manipulate or control the currency's value, making it more stable and resistant to market manipulation.

Navigating the volatility trap

Every day that goes by and Bitcoin hasn't collapsed due to legal or technical problems, that brings new information to the market. It increases the chances of Bitcoin's eventual success and justifies a higher price.
Hal Finney

With the term *volatility trap* we want to describe a behavioural finance phenomenon whereby investors get caught up in the emotional rollercoaster of an asset's price movements. In the case of Bitcoin, its high volatility can cause traditional investors to panic and sell off their holdings during periods of sharp price declines. All assets are prone to severe bear markets; however, a bear market in Bitcoin seem to be even more brutal than in other assets. While Bitcoin has faced substantial price declines from previous peaks, it has also demonstrated remarkable resilience and recovery in the face of adversity. In its short 14-year history, Bitcoin has already experienced several boom-and-bust cycles, with each cycle resulting in a higher overall price floor than the previous one.

Drawdowns of Major Assets from All-Time Highs



Source: Reuters Eikon, Incrementum AG

As experienced investors know, volatility is a natural part of investing and should not be the sole indicator of an asset's value or potential. In fact, some investors view periods of volatility as an opportunity to accumulate assets at a discount, knowing that the market will eventually correct itself.

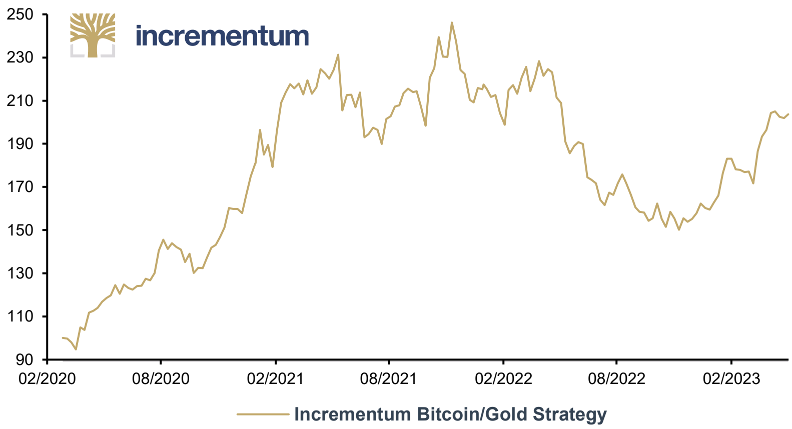
Owning gold and Bitcoin means being short fiat.
Mark Valek

Therefore, while the volatility trap can be a real challenge for investors, particularly those new to the cryptocurrency market, it is essential to maintain a long-term perspective and focus on the underlying technology, use cases, and adoption potential of an asset like Bitcoin. By doing so, investors can avoid getting caught up in short-term price movements and instead focus on the bigger picture of the asset's potential over time.

Volatility scares enough people out of the market to generate superior returns for those who stay in.
Jeremy Siegel

One potential solution to mitigate the risk associated with Bitcoin's volatility is to combine it with gold in a diversified portfolio. Gold's historical stability can help balance the high volatility of Bitcoin, potentially reducing the overall risk of the portfolio. This strategy could allow investors to benefit from the potential upside of Bitcoin while also mitigating the downside risk associated with its volatility.

Incrementum Bitcoin/Gold Strategy, 100 = 02/2020, 02/2020–05/2023



Source: Reuters Eikon, Incrementum AG

Conclusion

Bitcoin and gold are the two most liquid alternative assets in the world. They are not in competition, play different roles, have global cross-border and cultural appeal, and come together as an all-weather inflation hedge.
Charlie Morris

As illustrated above, the primary concerns that investors have expressed regarding Bitcoin are often misleading or unjustified. However, obtaining objective and impartial information about Bitcoin, its underlying technology, and its potential influence on the financial landscape can be a daunting task, especially given the cacophony of other cryptocurrencies competing for attention in the market. As a gold investor, it's understandable to be skeptical of Bitcoin and its potential as an investment.

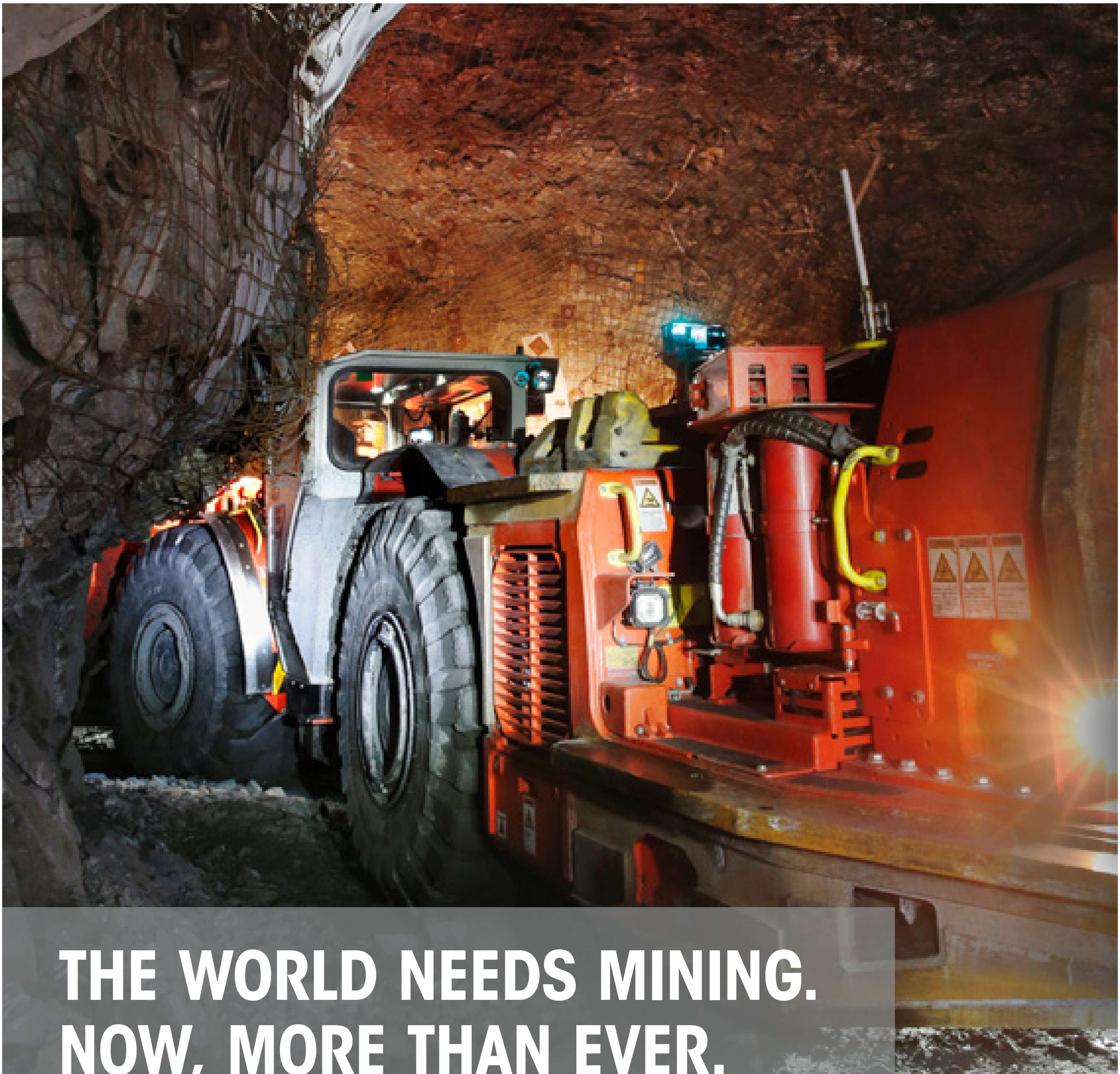
Gold has a five-thousand-year track record, and Bitcoin is hardly a teenager. However, as we've discussed, many of the criticisms levelled at Bitcoin are based on misconceptions or red herrings. The reality is that Bitcoin offers a unique combination of decentralization and security that is unmatched by any other asset. Bitcoin's growing adoption and potential for widespread use make it a viable option for investors looking to diversify their portfolios. As Rick Rule formulated it:

> *"Do I think that that there is room, as a medium of exchange, for an algorithm that also obviates the need for trust, is seamless and private, like Bitcoin? Absolutely. Do I want all of my savings stored in a unit of value, whose only value is an algorithm? No. I, as a consumer of currency, want lots of currencies, and I want to pick and choose the utility at different points in time in my career for different purposes."*

Bitcoin and gold are complementary assets rather than competitors. Each asset has its unique characteristics, benefits, and limitations.

That's what learning is. You suddenly understand something you understood all your life, but in a new way.
Doris Lessing

Bitcoin's key advantages include its digital nature, speed of transfer, and limited supply, while gold's strengths lie in its historical significance, physical durability, and widely accepted value. Therefore, the respective communities behind each asset should acknowledge their differences and unique features and understand that they can coexist and complement each other in an investment portfolio. **Let's bury the hatchet.**



Silver's Time to Shine?

Monetary and industrial silver drivers have come together at the same time like never before. That makes for amazing opportunities to profit from silver, which tends to enjoy multi-year bull markets.

Peter Krauth, Author of *The Great Silver Bull*

- **A combination of dwindling silver supply and resilient industrial demand is providing fertile ground for further silver price increases.**
- **The green energy transition is driving innovation in the solar PV industry, where increased silver loading in technologies such as TOPCON and HJT is further strengthening silver industrial demand, along with continued EV adoption.**
- **Government policies such as the Biden administration's Inflation Reduction Act are set to have an insulating effect on silver industrial demand, as commitments to net zero ramp up.**
- **Nonindustrial silver demand also remained strong in 2022, propped up by substantial jewelry and silverware demand from India, thus exacerbating an already broadening silver supply deficit.**
- **Where the yellow metal goes, its little brother silver tends to follow in a more sizeable fashion; therefore, gold will be the separating factor that decides silver's fate in 2023 and beyond.**
- **Our proprietary analysis shows that silver can particularly benefit from a reflationary dynamic, which typically occurs towards the end of a recession.**

Introduction

Any true champion can bounce back. That's what being a champion is: being able to deal with adversity and being able to bounce back.
Floyd Mayweather

After bouncing back from its all-time historical undervaluation relative to gold in 2020, the performance of silver in 2021 was considerably more subdued, as stagnant real rates helped contain the silver bull from making its charge. **Undeterred by this, silver turned over a new leaf in 2022, with a November bottom serving as a springboard for a momentous 40% rally up to April of this year.**

Silver Performance since 2000 in Various Currencies

Year	USD	EUR	GBP	AUD	CAD	CNY	JPY	CHF	INR	Average
2000	-15.0%	-9.2%	-8.1%	-0.1%	-11.9%	-15.0%	-5.0%	-13.9%	-8.9%	**-9.7%**
2001	0.4%	6.3%	3.3%	9.9%	6.7%	0.4%	15.7%	3.5%	3.8%	**5.6%**
2002	3.3%	-12.4%	-6.8%	-6.0%	2.0%	3.3%	-6.9%	-14.1%	2.7%	**-3.9%**
2003	24.6%	3.9%	12.4%	-7.0%	2.7%	24.6%	12.6%	11.9%	18.6%	**11.6%**
2004	14.5%	6.3%	6.6%	10.1%	6.2%	14.5%	9.3%	5.1%	8.6%	**9.0%**
2005	29.7%	48.6%	44.6%	38.3%	25.4%	26.5%	49.3%	49.8%	35.0%	**38.6%**
2006	46.1%	31.1%	28.4%	35.8%	46.4%	41.3%	47.4%	35.5%	43.3%	**39.5%**
2007	14.8%	3.8%	13.3%	3.4%	-1.8%	7.4%	7.4%	6.8%	2.5%	**6.4%**
2008	-23.5%	-20.1%	3.8%	-5.3%	-6.6%	-28.5%	-37.7%	-28.0%	-5.6%	**-16.8%**
2009	48.9%	45.4%	34.9%	17.4%	28.8%	49.0%	52.7%	44.6%	42.3%	**40.4%**
2010	83.4%	96.2%	89.9%	61.2%	73.8%	77.0%	60.2%	65.3%	76.6%	**76.0%**
2011	-10.3%	-7.3%	-9.9%	-10.5%	-8.2%	-14.3%	-14.9%	-9.9%	6.4%	**-8.8%**
2012	9.5%	7.4%	4.6%	7.7%	6.5%	8.4%	23.4%	6.9%	13.6%	**9.8%**
2013	-36.0%	-38.5%	-37.1%	-25.3%	-31.4%	-37.8%	-22.3%	-37.5%	-28.0%	**-32.7%**
2014	-19.3%	-8.3%	-14.2%	-12.0%	-11.7%	-17.3%	-8.3%	-10.2%	-17.7%	**-13.2%**
2015	-11.7%	-1.6%	-6.7%	-0.8%	5.2%	-7.6%	-11.2%	-11.0%	-7.2%	**-5.9%**
2016	15.2%	19.0%	37.6%	16.2%	11.8%	23.2%	11.9%	17.1%	18.3%	**18.9%**
2017	6.4%	-6.8%	-2.9%	-1.6%	-0.4%	-0.3%	2.5%	1.8%	-0.1%	**-0.2%**
2018	-8.7%	-4.5%	-3.2%	1.1%	-1.0%	-3.5%	-11.2%	-8.0%	-0.5%	**-4.4%**
2019	15.2%	17.8%	10.8%	15.6%	9.7%	16.6%	14.2%	13.6%	18.1%	**14.6%**
2020	47.8%	35.7%	43.4%	34.9%	44.9%	38.6%	40.5%	35.2%	51.3%	**41.4%**
2021	-11.7%	-5.2%	-10.8%	-6.4%	-12.4%	-14.1%	-1.6%	-9.0%	-10.0%	**-9.0%**
2022	3.0%	9.4%	15.2%	9.8%	10.5%	11.8%	17.3%	4.4%	14.4%	**10.6%**
2023 YTD	-0.6%	-1.5%	-3.4%	1.9%	-1.0%	1.0%	4.6%	-3.2%	-0.4%	**-0.3%**
Average	**9.4%**	**9.0%**	**10.2%**	**7.8%**	**8.1%**	**8.5%**	**10.4%**	**6.5%**	**11.5%**	**9.1%**

Source: Reuters Eikon (as of 05/19/2023), Incrementum AG

Silver's strong performance from late 2022 through to 2023 has somewhat appeased our thesis in the *In Gold We Trust* report 2022. Last year we wrote:

> *"If past cycles are anything to go by, silver will be pulled along by gold throughout the 2020s as we experience geopolitical and socioeconomic upheaval…. Then silver will take over and be pushed forward by the hot winds of inflation for a decade or two as governments burn off private and public debt levels via financial repression. We are bullish on silver through to the 2040s, but after that you're on your own."*[72]

[72] "Silver's Inflation Conundrum," *In Gold We Trust* report 2022, p. 291

If copper is the superhighway to decarbonization, then silver is the glue.
Michael DiRienzo, Silver Institute Executive Director

This thesis will come under renewed scrutiny in this chapter, as we re-evaluate the extent to which silver works as an investment for this current cycle. The chapter will begin with a brief summary of the Silver Institute's "World Silver Survey 2023" – the top publication on the global silver market, in our view, from the leading silver governing body, whom we were fortunate enough to interview earlier this year. This summary will help provide a contextual backdrop for our readers, before we draw on the industrial demand aspect that makes up the lion's share of total silver demand, and finally proceed by making a timely argument for silver investment as a high-beta play on gold.

Recently, the World Silver Institute published its 2023 World Silver Survey. **The key findings on the supply side are:**

- **Silver global mine production fell marginally by 0.6% yoy to 822.4moz** in 2022, due to lower byproduct output from lead/zinc mines, particularly in China and Peru.
- **Primary silver mine production increased marginally by 0.1%** to 228.2moz (7,099 tons).
- **Peru had the greatest decline in output**, falling by 8.5moz (263 tons), mainly due to the suspension of mining at Uchucchacua in Q4/21, falling grades at several major mines, and social unrest.
- **Recycling of silver rose by 3%,** with a total of 180.6moz (5,618 tons) recycled, primarily driven by a 7% increase in industrial scrap.
- The net supply from the official sector rose by 13% to 1.7moz (54 tons), its highest since 2013, but **remained insignificant in absolute terms**.

On the demand side, the key findings are:

- Total silver demand in 2022 saw a notable jump of 18% to 1,242moz, the highest in the series since 2010, with **all fabrication sectors except photographic and brazing alloys seeing growth to record highs**.
- After a modest rise in 2021, photographic demand resumed its structural downtrend in 2022, while silver **jewellery fabrication soared by 29% to a record high of 234.1moz**, driven by post-pandemic pent-up demand from India, heavy restocking by retailers, and a move to higher purities.
- **Silverware demand saw astounding growth of 80% to 73.5moz**, almost entirely driven by India, where demand saw a more than 100% jump last year on the back of employment and incomes returning to pre-pandemic levels.
- **Physical investment rose for a 5th straight year to a new high of 332.9moz**, with India emerging as the top performer in 2022 (+188% yoy), benefiting from lower prices and bargain hunting. The global delta-adjusted producer hedge book fell by 17.9moz to 18.6moz in 2022.
- **Offtake from the industrial segment reached a high of 556.5moz**, driven by green economy applications, especially the notable growth in photovoltaics, as well as electrification within the automotive segment, investment in power generation and distribution, and growth in the construction industry.

Eliminating either metal (gold and silver) from coinage would abridge the quantity of circulating medium and expose the country to the evils of a scanty circulation.
Alexander Hamilton

Silver "works" when government policy is favorable towards it. 150 years ago, this was certainly not the case in the US, as the 1873 Coinage Act removed silver's status as legal tender, in a move that was referred to at the time as the "great crime" by those with a disposition for bimetallism. The act was controversially passed without full debate in Congress, much to the dismay of the Greenback Party and the Free Silver Movement, who harbored great contempt for silver's demonetization, as they believed it would lead to deflation and harm the interests of farmers, workers, and other debtors.

Silver has been used by every major empire, starting with ancient Greeks up to 20th century America.
Peter Krauth

Despite this historical turbulence, silver is ambidextrous, boasting an ability to straddle between its title as the second-most-used commodity in the world behind oil and its historical role as a monetary metal. It is thanks to its industrial utility, that silver finds itself in a considerably more preferable legislative milieu today– the sentiment of which is encapsulated in a tweet by the sitting US President Joe Biden in January 2023: "This year, companies who choose to build clean construction projects — like solar and wind — right here in America will start receiving tax credits, helping to create thousands of good-paying jobs in our clean energy economy".

A vision, without a plan, is just a hallucination.
Will Rogers

The above comment serves as the theme for government initiatives such as the US's Inflation Reduction Act, which pledges USD 370bn towards renewable energy and aims to reduce CO_2 emissions by 40% by 2030. The same ESG rhetoric populates the policies of the US's global counterparts, such as Australia's Climate Solutions Package, which mirrors the Inflation Reduction Act in its attempts to incentivize investment into green infrastructure.

As an ancillary outcome of these policies, silver industrial demand, which comprises 54% of total silver demand, rose 5.4% in 2022 and is expected to rise 4% year on year in 2023, according to the 2023 World Silver Survey. These increases are also partly due to China's re-emergence out of lockdown. **China's re-acceleration of its 80% share of global solar capacity is likely a contributing reason for East Asia spearheading the expected rise in silver industrial demand in 2023.**

Geographical Distribution of Silver Industrial Demand Signals Weakening in West, Emerging in East

Forecast of Global Industrial Silver Demand, 2022-2023e

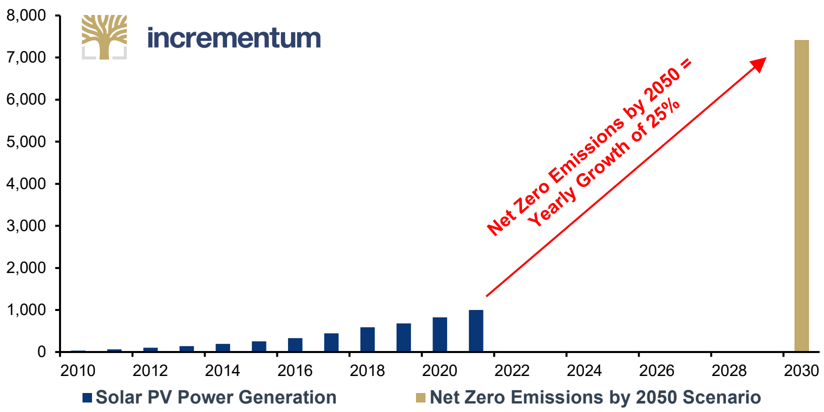
moz	2022	2023e	yoy
Europe	85.9	83.1	-3%
North America	132.9	135.8	2%
South Asia	42.6	44.3	4%
East Asia	280.9	298.7	6%
Others	14.3	14.6	2%
Global Total	556.5	576.4	4%

Source: Silver Institute, Metals Focus, Incrementum AG

A power can be overthrown only by another power, not by a principle, and no power that can confront money is left but this one.
Oswald Spengler, *The Decline of the West*

Whilst understanding the geographical distribution is important, the key point here for silver is that industrial demand has risen and is set to rise further, with much of this offtake derived from solar photovoltaics. Proportionate to 13% of total silver demand in 2021, solar PV demand grew 28% year on year in 2022, and looks set to continue its trajectory into the next decade, with 15% yoy growth expected in 2023, according to the 2023 World Silver Survey. In order to stay aligned with 2050 net zero targets, solar PV power generation will need to grow 25% yoy on average until 2030, meaning the amount of silver required for solar PV generation in 2030 will likely need to be over 7x the amount used in 2021. As a result, silver-laden solar PV panels will be sought after for recycling.

Solar PV Power Generation, in TWh, 2010-2030

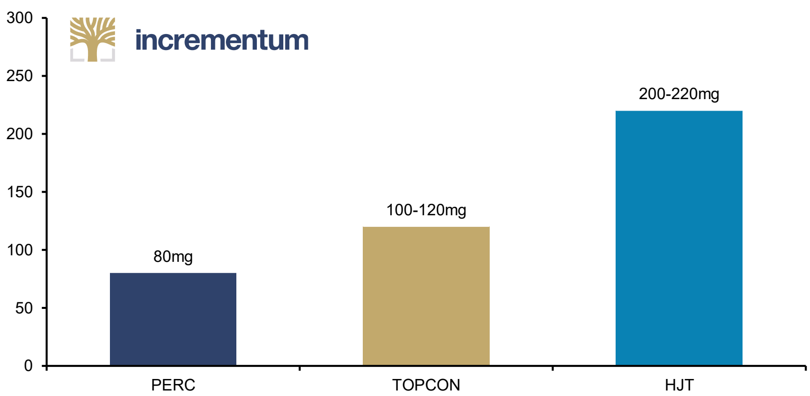


Source: IEA, Incrementum AG

We have this handy fusion reactor in the sky called the sun. You don't have to do anything. It just works. It shows up every day and produces ridiculous amounts of power.
Elon Musk

Functioning as an additional driver of silver industrial demand, the usage of silver per solar panel is also set to rise, on the coattails of a reversing loading trend that previously saw declining silver usage per panel, according to Chen Lin, an industry expert in silver. The inversion of this silver loading downturn will see the amount of silver per panel increase incrementally as we progress through the decade, which should offer robust support for continued silver industrial demand, provided that the rate at which new technologies are adopted is not too lethargic.

Silver Usage per Solar Panel, in mg



Source: Silver Institute, Incrementum AG

Any technological advance can be dangerous. Fire was dangerous from the start, and so (even more so) was speech – and both are still dangerous to this day – but human beings would not be human without them.
Isaac Asimov

Silver is mainly used in PERC solar cells as conductive paste for the front and rear electrical contacts and tends to require around 80mg of silver per solar module. PERC cells (the abbreviation stands for *passivated emitter and rear contact*) boast a long track record of commercial deployment, with their performance and reliability well-established in the market. However, the next advancement in solar panels, TOPCON, which stands for *thin-layer organic photovoltaic coating ON [silver]*, brings higher efficiency rates than PERC cells, especially in low light conditions, due to the combination of the organic photovoltaic layer and the silver substrate.

TOPCON requires an additional tunnelling layer compared to the traditional PERC cell and contains a higher silver loading of 100-120mg per solar module, as compared to the 80mg of its PERC predecessor. Moreover, TOPCON solar cells are more flexible than PERC cells, which can make them easier to integrate into various applications, whilst also being less expensive to produce than PERC cells, as they do not require some of the more complex manufacturing processes involved in PERC production.

In the Sun, I feel as one.
Kurt Cobain

It is partially for these reasons that Chen Lin sees 2023 as "the year of TOPCON", but even TOPCON is not immune to the ever-changing winds of disruptive innovation. In the same way that TOPCON is set to displace PERC, the significantly more highly silver-loaded HJT solar module is set to displace TOPCON in 2025, as it asserts its position at the cutting edge of solar panel innovation.

HJT, which stands for *hetero junction technology,* surpasses the efficiency of TOPCON cells and also displays better durability, with a longer lifespan than TOPCON due to its better passivation, which reduces degradation over time. **Importantly, HJT cells utilize double the amount of silver than TOPCON and almost triple the amount of silver than PERC cells, thus serving as a significant driver of long-term silver industrial demand.**

Innovation is the ability to see change as an opportunity – not a threat.
Steve Jobs

Despite this, it is worth noting that academics recognise the dangers that a potential overdependence on silver could pose, with the UNSW in Australia outlining: "*The transition to high-efficiency technologies including TOPCON and SHJ could greatly increase silver demand, posing price and supply risks*". As a result, innovation is being attempted by the likes of Fraunhofer Institute for Solar Energy Systems to reduce silver loading in solar panels, with some degree of success. The Fraunhofer Institute explains:

> *"Using RSP for the front- and/or rear-side metallization reveals an impressive reduction of the average wet silver paste laydown by 60–70% (fully RSP printed cells) and 49% (RSP rear side, FSP front side) compared to the FSP reference process. … This corresponds to a very low total silver consumption of 6-9 mg W for bifacial solar cells fully or partly metallized with RSP compared to 17 mg W".*

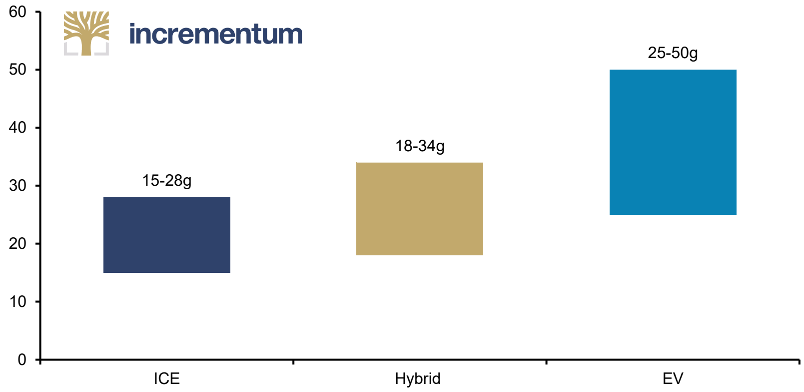
Innovation is the whim of an elite before it becomes a need of the public.
Ludwig von Mises

Whilst the above innovations are noble attempts at silver reduction, it is estimated that by 2025 more than 50% of solar panels will be either TOPCON or HJT technology. Consequently, the higher silver-load of these modules compared with their predecessors will see silver industrial demand benefit from the continued adoption of solar panels, as the green energy source gains ground on the power capacities of the likes of coal, natural gas and hydropower, until it surpasses them in 2027, according to IEA projections.

The Vehicle for Resilient Industrial Demand

The increased use of silver can also be seen in what the Silver Institute refers to as "a firmer automotive sector" in 2022, driven by the transition away from the internal combustion engine.

Silver Content per Vehicle, in g



Source: Silver Institute, Incrementum AG

I've got a silver machine,
It flies, sideways through time,
It's an electric line to your zodiac sign.
Hawkwind

Following the same displacement pattern as for solar panels, hybrid vehicles utilize a superior amount of silver versus internal combustion engines, whilst EVs rely on higher silver usage than hybrid vehicles. According our friend Gianni Kovacevic, former CEO of CopperBank, the average Tesla is estimated to contain over 56 grams of silver – as well as a staggering 100kg of copper – which, when combined with the fact that Tesla vehicle sales (quarterly deliveries) grew from just under 250,000 in Q3 2021 to over 400,000 in Q4 2022, suggests that silver looks set to benefit as this trend incubates.

Based on strong (heavily subsidized) demand, the transition to electric vehicles accelerated in 2022. There was a tenfold increase in global EV sales, from 1 million in 2017 to over 10 million in 2022 – a trajectory that is expected to extend itself to 14 million by the end of 2023, according to the IEA.

These green gains can be partially attributed to new policy implementation, namely from the European Commission, which put forward the *Fit for 55* package in 2022, in an attempt to gear up the world's second largest EV market. This includes a plan to increase the deployment of electric vehicles and charging infrastructure in the European Union, with the ultimate aim of ensuring that all new cars registered in the EU are zero-emission by 2035. According to the European Commission, "as an intermediary step towards zero emissions, the new

CO2 standards will also require average emissions of new cars to come down by 55% by 2030, and new vans by 50% by 2030".

Progress lies not in enhancing what is, but in advancing toward what it will be.
Khalil Gibran

So far, there appears to have been progress towards these targets, according to the European Environment Agency. Electric car registrations for 2021 increased to close to 1,729,000 from 1,061,000 in 2020 – an increase from 10.7% to 17.8% in the share of total new-car registrations in the space of one year. This progress has not stagnated in Europe, either, with one in five car sales electric in 2022, a 15% increase in electric car sales year over year, according to the IEA.

In the US, the story is similar. Through the Environmental Protection Agency, President Biden's administration proposed new emissions standards that would see carmakers forced to produce electric vehicles almost exclusively by 2032, with a goal to reduce CO2 emissions from new cars and light trucks by 56% in less than 10 years. Whilst the US made reasonably good headway towards these targets in 2022, with electric car sales increasing 55% year on year, **the Government's new provisions would require two out of three passenger vehicles in the US to be electric models by 2032 – a significant increase from the current 8% of total US auto sales represented by EVs.**

I'm trying to be as green as I can. As an airline pilot, I have a carbon footprint that's a size 10, so it's pretty hard.
Bruce Dickinson

Across the pond in the UK, the 2023 proposal by the Conservative Government would see minimum zero-emission vehicle (ZEV) sales targets begin at 22% in 2024 and increase to 80% in 2030 before reaching 100% in 2035. These are some of the most aggressive steps towards EV adoption globally; and with EV sales already representing almost 17% of sales in 2022 – surpassing sales of new diesel cars for the first time – it is evident that the UK is much further on than the US.

Despite the proximity of a green utopia appearing to be more distant for the US on the EV front, the key player here is China. In 2022, China accounted for around 60% of global electric car sales, trumping all of the Western countries' share combined. Furthermore, the industrial might of China possesses such puissance, that it has already surpassed its 2025 target for new electric vehicles, leagues ahead of the West, according to the IEA.

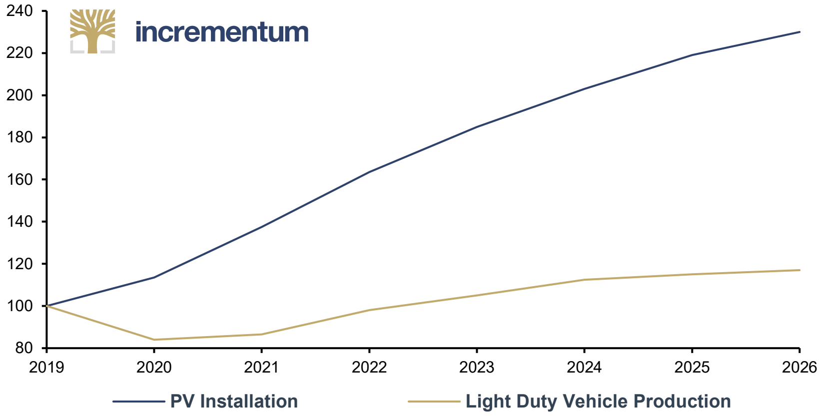
Ultimately, what matters here for silver is the collective increase in commitment towards renewables technologies from the governments of all the countries mentioned. Going forward, this commitment should bode well for the EV facet of silver industrial demand, offering further support to silver demand.

However, we must not overestimate the impact of EV demand on total silver demand. Peter Krauth's calculations suggest EV demand could be as low as 1.0% of total silver demand, or 1.3% of total supply (including recycling), and 1.6% of total mined supply. These estimates are based on an average EV silver consumption of 1.29 troy ounces (40g), with total EV sales in 2022 of 10mn equating to an annual silver demand of 1.24bn ounces.

There has to be an invisible sun,
It gives its heat to everyone
There has to be an invisible sun,
That gives us hope when the whole day's done.
The Police

Therefore, it is important to stress that it is solar demand that defines silver industrial demand *now,* and it is solar that will define it even more in the future, with expectations of silver in solar PV installations dramatically outperforming silver's forecasted use in light duty vehicle production. **In the US, those who install a PV system between 2022 and 2032 will receive a 30% tax credit – a contributing factor to the forecasted PV installation rise.**

PV Installation and Light Duty Vehicle Production, 100 = 2019, 2019-2026



Source: Silver Institute, Metals Focus, Incrementum AG

A hypocrite is the kind of politician who would cut down a redwood tree, then mount the stump and make a speech for conservation.
Adlai Stevenson

As with EVs, the strength of government commitments to solar provides a layer of protection that shields it from being substituted by cheaper alternatives such as oil and gas. And whilst there is a threat that governments will be forced to abandon their green pursuit in event of a severe recession, this unprecedented U-turn would likely result in public accusations of hypocrisy that any standing government would be keen to avoid.

To this point, the only visibly significant risk facing silver industrial demand would be the prospect of thrifting or substitution *within* the green metals. However, the Silver Institute has already confirmed in its 2023 report that this is being successfully countered, in part thanks to the synergies in efficiency garnered from the aforementioned solar technologies: "[M[anufacturers have invested heavily and made impressive progress in silver thrifting and substitution in recent years, mainly through the three aspects of process optimization, alternative materials, and improved cell structure design.*"*

Finally, whilst we agree to an extent with the rhetoric of the brilliant economist Doomberg, who alludes to the idea that the silver price would lose its footing without solar PV demand, the likelihood of this occurring is low in our view, due to the aforementioned insulating effect that government resoluteness towards net zero has on silver industrial demand.

If you don't know jewelry, know the jeweler.
Warren Buffett

Even if solar PV demand did fall in the unlikely case that governments fold on their net zero pledges, the silver price would likely be buoyed in the near term by nonindustrial demand drivers such as jewelry demand – a 17% segment of silver demand that grew 29% year on year in 2022 – as well as the less notable, but important nonetheless, 4% silverware segment, which grew 80% in 2022. Both rises can be partially attributed to India's perception of silver as an auspicious metal.

Indian Jewelry, Fabrication (lhs), in moz, and Gross Export Weight (rhs), in moz, 2013-2022

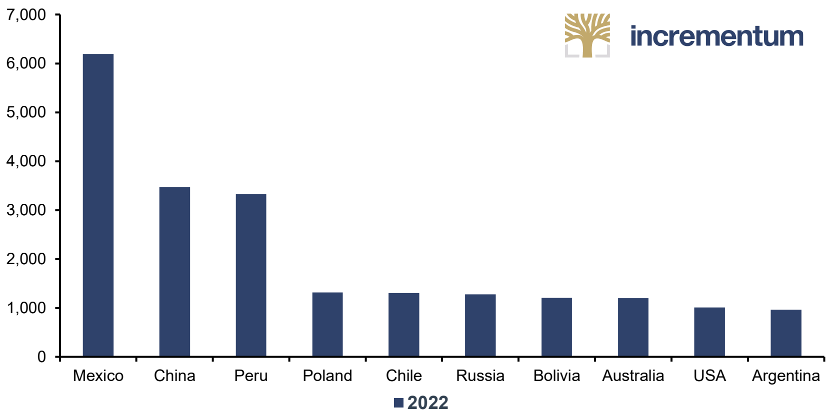
Source: Silver Institute, Metals Focus, Incrementum AG

Auspicious Silver's Asian Association

Real gold does not fear the test of fire.
Chinese Proverb

Although silver has a famously long tradition in Asia, the focus has clearly been on gold since the global demonetization of silver, which is a theme that we explored earlier in our Asian gold demand chapter. Importantly, gold's prevalence is not solely contained to China and can also be observed in Asia more widely, where the precious metal has the much greater tradition as a store of value, medium of exchange, and bridal gift when compared with silver. This certainly has to do with the much smaller silver deposits in the region, which is evidenced by the fact that no Asian country is represented in the top 10 silver producers except China.

Top 10 Silver Producing Countries, in Tonnes, 2022



Source: Silver Institute, Metals Focus, Incrementum AG

Cut yourself a big slice with the silver server, a big slice of the pie.
Sylvia Plath

Nevertheless, the main consumption of silver still takes place in Asia, which speaks to the magnitude of the region's 59.8% share of the total world population**.** On one hand, this is due to jewelry and investment demand from South and Southeast Asia – where traditions are well established – and on the other hand comes from the white metal's industrial function. As outlined, silver's industrial sector represents over half of total silver consumption, with 60% of this accounted for by Asian industrial demand.

Global Silver Demand, 2021-2022

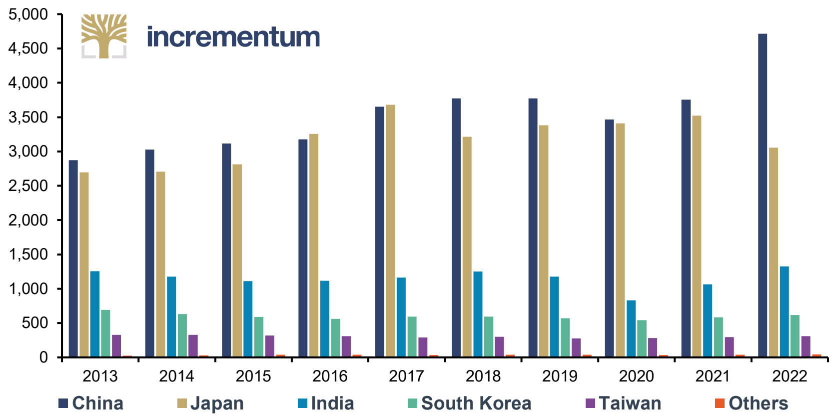
Tonnes	2021	2022
Industrial (Total)	16,427	17,309
Electrical & Electronics	10,918	11,555
...of which Photovoltaics	3,423	4,365
Brazing Alloys & Solders	1,566	1,524
Other Industrial	3,943	4,229
Photography	862	855
Jewelry	5,645	7,280
Silverware	1,267	2,286
Net Physical Investment	8,522	10,356
Net Hedging Demand	110	557
Total Demand	**32,833**	**38,643**

Source: Silver Institute, Metals Focus, Incrementum AG

China will always remain the builder of world peace, a contributor to global development, and upholder of international order.
Xi Jinping

Of course, China plays the central role here, as previously mentioned, with its 80% share of global solar capacity**.** However, Japan, Korea, and Taiwan, with their large electronics industries, also represent a weighty factor. In Taiwan, the recent increase in silver demand can be partially attributed to the reorientation of the semiconductor industry; and if there is an increasing diversification of the electronics industry away from China, then Malaysia, Thailand, Vietnam and Indonesia should see themselves become beneficiaries of this. In the medium term, this should be reflected in robust silver demand in the region, adding a further layer of reinforcement to the already strong silver price floor.

Asian Industrial Silver Demand, in Tonnes, 2013-2022



Source: Silver Institute, Metals Focus, Incrementum AG

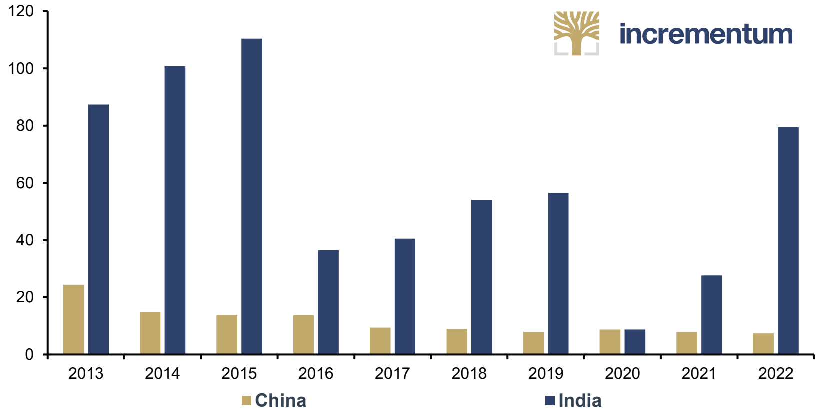
Returning to China again, it is important to note that the Middle Kingdom's relationship with silver has changed significantly over time. Apart from the industrial demand that is naturally high in view of the size of the Chinese market, all other metrics of silver demand have been weak in China in recent years – a reflection of the country's increased prosperity.

Whilst China was an insatiable consumer of silver in the 17th and 18th centuries, this monetary demand has seen a decline due to its more recent preference for gold. The same applies to the production of silver jewelry in China, which has been falling for years as higher disposable incomes cause Chinese consumers to opt for gold jewelry in place of silver. From an investment perspective, the role of silver is also a subordinate one, as whilst the Shanghai Futures Exchange (SHFE) has the world's largest turnover in silver futures and the Shanghai Gold Exchange (SEG) ranks No. 4 in global silver trading, it is primarily industrial users who cover and/or hedge their needs here. The bottom line is that China – unlike the US, which relies on imports for 70% of consumption – is now a silver exporter, with USD 4.28bn shipped out of China in 2021, versus USD 1.68bn of imports in the same year.

(India is) the one land that all men desire to see, and having seen once, by even a glimpse, would not give that glimpse for all the shows of all the rest of the globe combined.
Mark Twain

India is completely different: Here silver plays a huge role in both the investment and jewelry sectors. The fact that last year brought not only record demand of 1,242moz but also the largest ever supply deficit of 237.7moz, is largely due to the exploding Indian demand, which had collapsed to virtually zero thanks to Covid and is now coming back strongly.

Physical Silver Investment, in Tonnes, 2013-2022



Source: Silver Institute, Metals Focus, Incrementum AG

Unlike in China, silver remains the investment vehicle of the "little guy" in India. In this context, gold is often deemed too costly for investors and savers in the subcontinent, leading them to opt for silver as an alternative. As with gold, Indians and Asians are generally price-sensitive to silver and tend to behave countercyclically: (Additional) purchases are made when prices are falling, whereas in phases of strong or even overshooting prices, buying tends to be discontinued.

For, if the price is low enough to create a substantial margin of safety, the security thereby meets our criterion of investment.
Benjamin Graham

Importantly, this value investment dynamic is predominantly associated with silver, whereby investors are attracted to the metal during times when it possesses lower downside risk. This draws from the Benjamin Graham school of value investing – a practice perfected by a certain Oracle of Omaha, Warren Buffett, who was himself allured by silver's appeal in 1997.

In addition to this value investment quality of silver, the devastating Covid lockdowns had a critical role in the 2020 consumption slump. When prices shot up sharply in Q3/2020, rising higher than at any time since 2013, many sold their silver. These investors came back in both 2021 and 2022, with physical silver demand last year in India increasing by almost 200% to 2,470 tonnes. From this perspective, if silver prices continue to rise, Indian consumer spending should take a significant hit, and to that extent, there are some limits to price fantasies.

There are always new places to go fishing. For any fisherman, there's always a new place, always a new horizon.
Jack Nicklaus

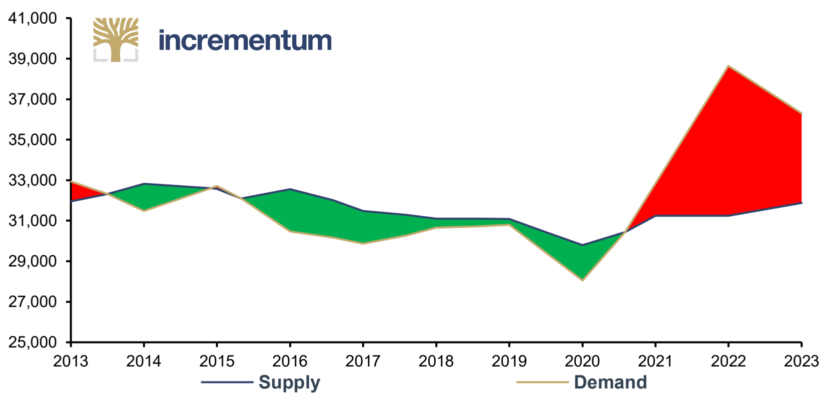
Notwithstanding this, the changing investment landscape also opens up new opportunities for silver. Since the end of 2021, it has been possible to invest in silver exchange-traded products (ETPs), whilst "digital silver" is also an emerging form of investment. Here, the investor currently buys the silver through one of nine providers of physical silver, where their investment is then stored by the providers on the investor's behalf. Of course, a payout is also possible after payment of fees and value-added tax.

Finally, the Indian International Bullion Exchange (IIBX) opened its doors in August 2022. The target group here is certified precious metal dealers, who can purchase their goods directly from foreign suppliers via the IIBX. Until now, only banks authorized by the state were allowed to import gold, but with the IIBX, gold trading should become more transparent and cheaper in India. Ultimately, whilst only gold trading is possible on the exchange at the moment, it is only a matter of time before silver trading is released.

Silver Short On Supply

The combination of resilient silver industrial demand and potentially explosive silver investment demand led by price increases in gold, will only worsen an already widening silver supply deficit.

Silver Market, in Tonnes, 2013-2023e

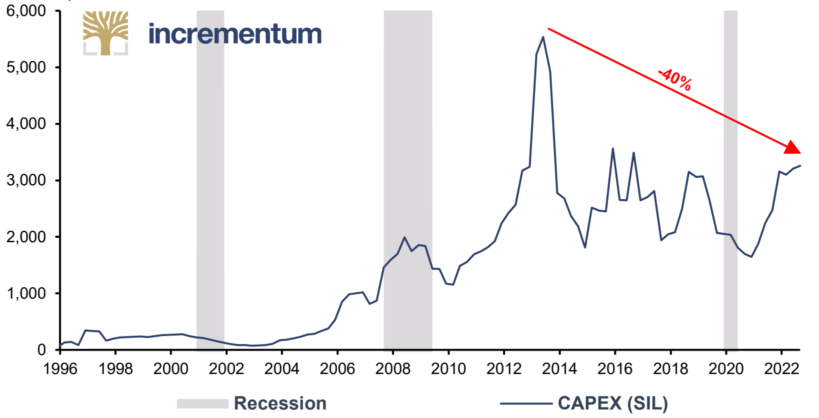


Source: Silver Institute, Metals Focus, Incrementum AG

It is not in the power of governments to increase the supply of one commodity without a corresponding restriction in the supply of other commodities more urgently demanded by consumers.
Ludwig von Mises

As with the majority of commodities in the last decade, the lack of capex is the culprit for the supply demand mismatch that silver finds itself in today. In 2013, capital expenditures for SIL-ETF members[73] peaked at USD 5,540mn, falling to USD 1,648mn in 2020, as the price of silver plunged to a decade low of USD 16.55 in March 2020, thus failing to entice capex into new mine production.

Aggregate Trailing 12 Month CAPEX for SIL ETF Members, in USD mn, Q1/1996-Q3/2022

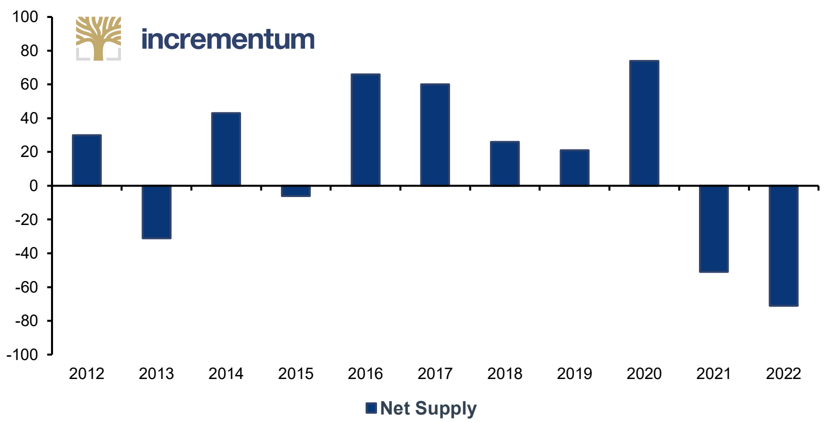


Source: Crescat Capital, Reuters Eikon, Incrementum AG

If you have a lot of what people want and can't get, then you can supply the demand and shovel in the dough.
Lucky Luciano

This capex shortfall manifested itself in 2022, with mine supply down by a structural deficit of 237.7Moz, equating to 24% of total supply, according to the 2023 World Silver Survey. These supply shortages were particularly visible in the declining global silver inventories in 2022, which fell by 430.9Moz from their end-2020 peak. Commenting on this decline, the Silver Institute writes: "To put this into perspective, it is equivalent to more than half of annual mine production, and also more than half of the inventories held in London vaults offering custodian services, as reported by the LBMA". **Silver's considerable supply deficit isn't going to be alleviated anytime soon.**

Silver Net Supply, in moz, 2013-2022



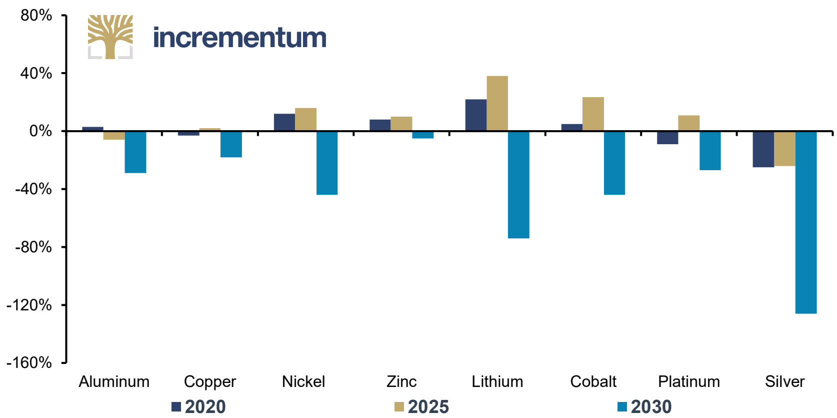
Source: Silver Institute, Metals Focus, Incrementum AG

As mentioned in the chapter on the capital expenditure cycle, mining project development lead times for silver sit at 15 years on average (IEA), amidst a backdrop of chronic talent shortages more broadly in

[73] The Global X Silver Miners ETF (SIL) includes: Wheaton Precious Metals, Pan American Silver, Hecla Mining, Industrias Penol, Korea Zinc, SSR Mining, First Majestic Silver, Buenaventura, Fresnillo, MAG Silver, Fortuna Silver Mines, Triple Flag Precious Metals, Coeur Mining, SilverCrest Metals, Endeavour Silver, Aya Gold & Silver, Adriatic Metals, Silvercorp Metals, GoGold Resources, McEwen Mining, Hochschild Mining, Gatos Silver, Vizsla Silver, New Pacific Metals, Discovery Silver, Silver Mines, Kingsgate Consolidated, Prime Mining, AbraSilver Resource, Americas Gold and Silver, Guanajuato Silver, Dolly Varden Silver, Santacruz Silver, Gold Resource Corporation, Blackrock Silver Corp, Golden Minerals.

the mining sector. According to McKinsey, 71% of mining leaders are finding that the talent shortage is holding them back from delivering on production targets and strategic objectives, which provides one of the reasons for Goldman Sachs' assessment of "no supply response in sight" for commodities across the board. Incidentally, the white metal finds itself amongst the hardest hit of these commodities, with the Silver Institute expecting that "supply shortages will remain a theme for the silver market throughout the next five years".

Metals Market Balance, as % of Supply, 2020-2030

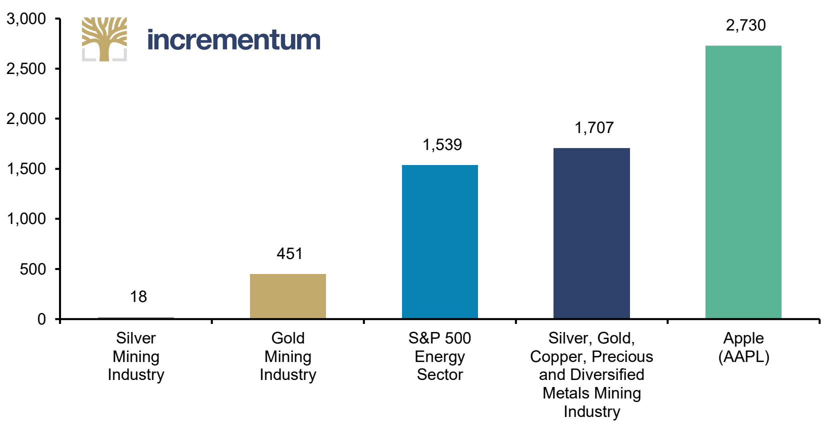


Source: IEA, CRU Woodmac, Platts company reports, IAI BodA Global Research, Incrementum AG

The average iPhone, for instance, contains 0.34 grams of silver. That might not seem like a whole lot. But when you multiply that by the 232 million iPhones sold each year, it amounts to 2.54 million ounces of silver.
Peter Krauth

The future scarcity of supply will have lasting implications for what is already a small market in silver, yet valuing this market is notoriously difficult. Some calculations suggest a market cap based on an all-time mine supply of USD 60bn x USD 25 price of silver to be a fair estimate; however, this was called "bogus" by David Morgan, due to a failure to account how much silver is actually available. Whichever way you measure the size of the silver market, though, it is clear that it is relatively insignificant. **The silver mining industry's market capitalization of USD 18bn is dwarfed by its big brother gold and made to seem like a speck of dust when compared with Apple.**

Market Capitalization, in USD bn, 05/2023



Source: Reuters Eikon, Incrementum AG

I think we're tighter than the price shows…at some point its got to factor into the overall market.
David Morgan

Importantly, this small market size makes the white metal significantly prone to large purchases, such as the famous Warren Buffett silver swoop in 1997. Leading up to 1998, Buffett's investment firm, Berkshire Hathaway, had "accepted delivery of 87,510,000 ounces in accordance with the terms of the purchase contracts" but had to wait until March 6, 1998, for the remaining 42,200,000 ounces worth of contracts to be delivered, as the initial supply was insufficient.

If we see a whale-sized Buffett-esque purchase this year, or a continuation of the net hedging demand that increased by a considerable 409% yoy in 2022, the USD 18bn market size of silver would be tested significantly. Therefore, when considering all of the demand drivers mentioned in this chapter and the nature of silver's sensitivity to recent supply woes, we expect to see a future where silver continues to be vulnerable to significant price hikes – a sentiment echoed by Citi: "*The silver market is absolutely tiny relative to the scale of speculative interest volatility, so investor buying often has an outsized impact on prices*".

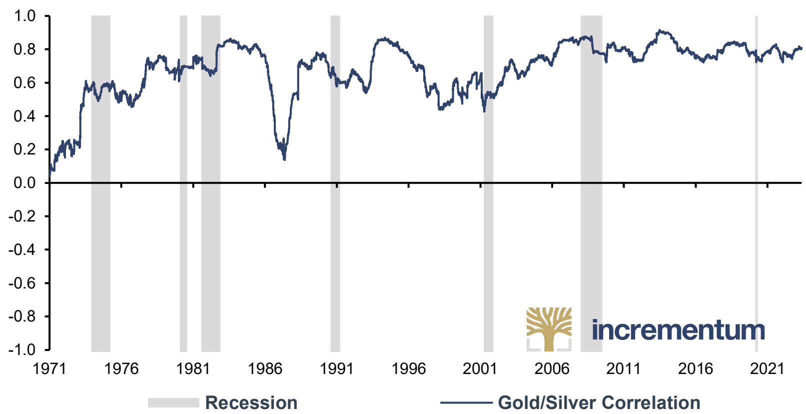
Gold Walks So Silver Can Run

Make new friends, but keep the old. One is silver, the other is gold.
Joseph Parry

In light of the factors posited above, we remain confident that the current supply/demand-setup will serve as a sturdy foundation for the silver price, but they will not be the factors that drive outperformance. Instead, we propose that the gold price's ability to continue past its recent breach of the USD 2,000 mark will be a more significant determinant of silver (out)performance in 2023.

Firstly, gold and silver's storied companionship has been one of strong correlation throughout the last few decades, whereby the reaction to economic conditions has produced a unified price response from both the yellow and white metals.

Gold/Silver Correlation, 01/1971-05/2023



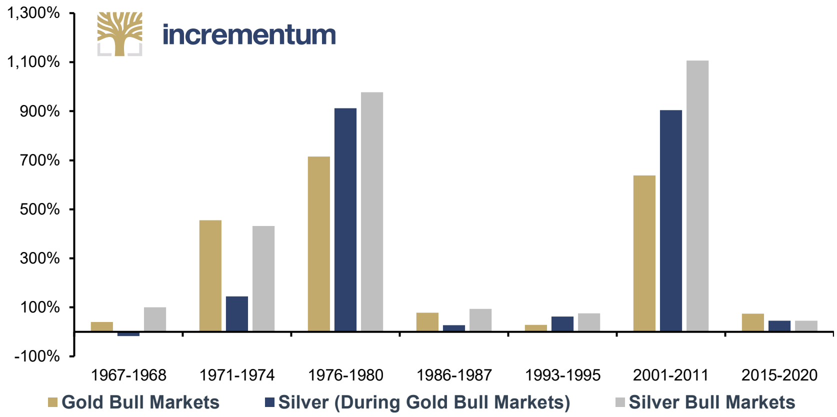
Source: SD Bullion, Reuters Eikon, Incrementum AG

In the interchange of thought use no coin but gold and silver.
Joseph Joubert

The relationship between the two metals that are synonymous with wealth and prosperity has also been examined in academic spheres. In 2014, Baur and Tran analysed the correlation between gold and silver over the 1970-2011 time period, taking into account the impacts of bubbles and financial crises on this relationship. The pair concluded that there was clear evidence of a co-integration relationship, with their essential takeaway being that **gold prices drive the gold-silver**

relationship. This theme is visible in the chart below. Note that silver's price rises are clearly preceded by gold bull markets.

Performance of Gold and Silver during Bull Markets, 1967-2020



Source: CPM Group, Incrementum AG

The Gold-Propelled Silver Slingshot

Hey brother, there's an endless road to rediscover.
Avicii

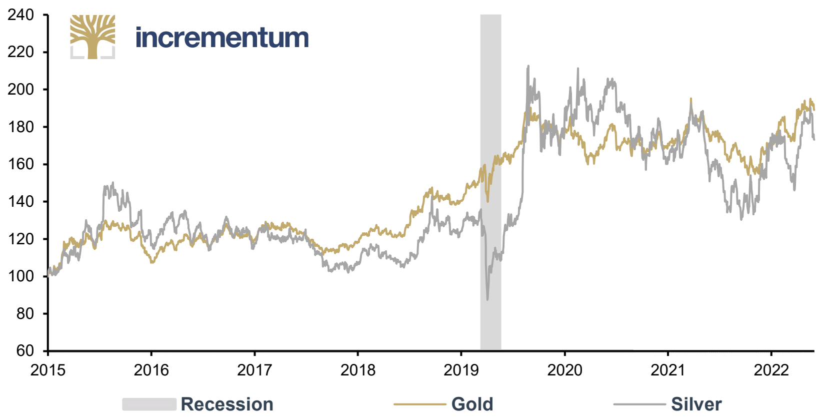
- In 1967/68, following the collapse of the London Gold Pool, gold increased 40% in a period where silver was weak, until the white metal realized that its big brother had risen for a valid reason, and subsequently chased after gold, outperforming the yellow metal based on its own peaks and troughs.
- In 1971-1974, provoked by Nixon hammering the final nail in the coffin of monetary stability, gold rose 455% as populations sought alternative stores of value. This time silver got the message, rising 144% during the same period but falling just short of gold in its own bull run – **the only time this happened in all of the gold bull markets since 1967.**
- During 1976-1980, **amidst a time of high inflation, political instability and weakness in the US dollar**, the price of gold skyrocketed by 715%. Silver understood the assignment even better this time around, rising high above gold in its own bull market as well as during gold's.
- In 1986-87, when Middle East conflicts created a brief oil fiasco, silver was slower off the mark to follow gold's 78% rise, though it ultimately outperformed gold in its own bull market.
- From 1993-1995, as central banks – particularly in the East – purchased gold to diversify currency reserves, the yellow metal saw a punitive "bull market" of 28%, with silver going on to more than double this in the same period, and effectively triple within its bull market.
- Finally, the period of 2001-2011 saw silver's greatest outperformance yet, as a period of dovish central bank policy and financial crises fueled gold's charge of 636%, which was bettered yet again by silver astronomical rises.

From this historical analysis, we learn that silver's outperformance of gold is an unequivocal hallmark of gold bull markets. However, when we look to the ongoing silver and gold bull markets of today (2015-2023), we see that silver (and gold) still have much further to run from both a technical and fundamental perspective.

Don't let silver's volatility scare you away. Instead, make it work for you.
Peter Krauth

Following gold's increase of 91.6% since the start of its own bull market, lasting from December 17, 2015 until May 12th, 2023, silver has risen only 70.2% for the same period, and 90.6% using its own peaks and troughs.

Performance of Gold and Silver, 100 = 12/17/2015, 12/2015-05/2023

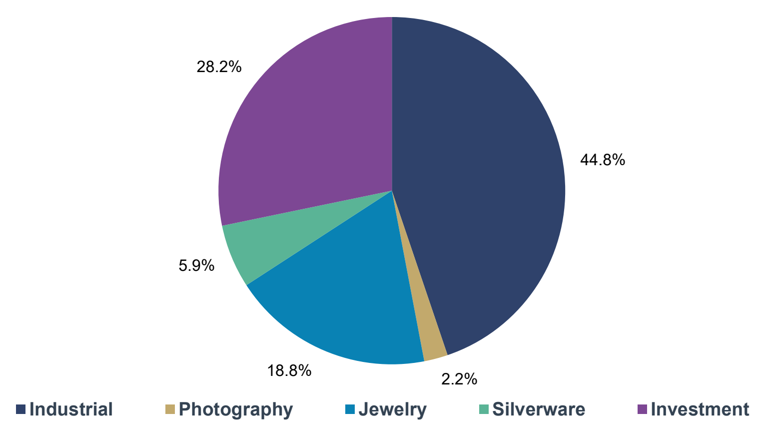


Source: Reuters Eikon, Incrementum AG

Nobody really understands gold prices and I don't pretend to understand them either.
Ben Bernanke

In our view, gold finds itself in what could be described as a perfect storm for further price increases, as the Federal Reserve pivot looms and the debate around the US debt ceiling intensifies. When these factors come to a head, we see gold being the first responder, ahead of silver, as the white metal's investment component, representing just 22% of total silver demand, gets overshadowed by gold's monetary demand component that stands at over 50%. This – combined with gold's inverse correlation with interest rates – will see the yellow metal gobble up investment demand when the prospect of a second wave of inflation transforms from a mirage into reality.

Silver Demand by Category, 2022



Source: Silver Institute, Metals Focus, Incrementum AG

Inflation is just like alcoholism. In both cases... the good effects come first; the bad effects only come later.
Milton Friedman

Importantly, silver's role as an inflationary asset makes it well positioned to mitigate these risks, too, and there is already evidence of this in silver's net physical investment demand, which rose by a highly respectable 22% in 2022. This helped drive sales of silver bars and coins to a fifth consecutive year of growth, achieving a record high of 332.9Moz in the process, according to the 2023 World Silver Survey.

Despite this, silver is not the dominant monetary metal, and will rely on gold to lead the way in this category. Therefore, if the gold price crosses all-time highs, as we expect it to do, on the back of strong monetary demand, we see gold's momentum dragging the price of the second-choice monetary asset with it at such a pace that the gold/silver ratio - which currently sits at around 80 - will be stretched until silver is obligated by gold to rise.

A silver hammer can open an iron gate.
Basque Proverb

To provide some further context on the potential reach of this 'silver slingshot' effect, for the gold/silver ratio to realize its historical median of 30, the price of silver would have to rise to USD 67 at a gold price of USD 2,000. With silver already historically undervalued at USD 25 based on this historical median, the upward pressure on silver prices will be substantial to say the least, when gold prices increase further.

Silver Price Matrix, in USD, Gold/Silver Ratio (x-axis), and Gold (y-axis), in USD

	10	15	20	25	30	35	40	45	50	55	60	65
1,400	140	93	70	56	47	40	35	31	28	25	23	22
1,500	150	100	75	60	50	43	38	33	30	27	25	23
1,600	160	107	80	64	53	46	40	36	32	29	27	25
1,700	170	113	85	68	57	49	43	38	34	31	28	26
1,800	180	120	90	72	60	51	45	40	36	33	30	28
1,900	190	127	95	76	63	54	48	42	38	35	32	29
2,000	200	133	100	80	67	57	50	44	40	36	33	31
2,100	210	140	105	84	70	60	53	47	42	38	35	32
2,200	220	147	110	88	73	63	55	49	44	40	37	34
2,300	230	153	115	92	77	66	58	51	46	42	38	35
2,400	240	160	120	96	80	69	60	53	48	44	40	37
2,500	250	167	125	100	83	71	63	56	50	45	42	38

Source: Reuters Eikon, Incrementum AG

Bad debt is debt that makes you poorer. I count the mortgage on my home as bad debt, because I'm the one paying on it.
Robert Kiyosaki

With almost 60% of adult US Americans living paycheck to paycheck, we expect the growing unaffordability of gold to deter the less-affluent segments of the population, who will increasingly seek refuge in the white metal in anticipation of further inflation. This will galvanize silver investment demand from 2022 onwards, which, in addition to the resilient industrial demand, will concoct a recipe for total silver demand that looks set to remain very robust.

Navigating Silver's Volatility

When night hath set her silver lamp high, then is the time for study.
Philip James Bailey

Clearly, the existing supply-demand fundamentals play into silver's hands. However, in the past, silver's high volatility – combined with strong drawdowns - have made it difficult for investors to time their entry points. **In light of this, it is even more important for (potential) silver investors to apply a greater dose of studiousness than with other asset classes such as stocks, bonds, or gold, when identifying favorable times for silver investment.**

Given the current economic situation, we consider the performance analysis of silver in times of recession to be a particularly relevant topic. In Chapter 3, we examined the performance of gold, commodities, and equities using our *Incrementum Recession Phases Model* (IRPM). In the following, we focus on the performance of silver in times of recession and analyze its usefulness in such conditions. **As we have seen, silver has both monetary and industrial value, which means it differs from most other commodities**.

Silver Performance in the *Incrementum Recession Phase Model*

Date	Duration (months)	Recession	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
01/1970-11/1970	11	-12.3%	14.9%	3.2%	-2.7%	-12.6%	0.9%
12/1973-03/1975	16	42.4%	14.0%	89.4%	-22.4%	-3.1%	6.4%
02/1980-07/1980	6	-53.5%	275.3%	-60.0%	n/a	16.3%	-15.2%
06/1981-11/1982	18	-7.5%	-43.3%	-13.7%	-13.3%	23.6%	38.1%
08/1990-03/1991	8	-19.8%	-7.3%	-13.3%	0.7%	-8.1%	7.3%
04/2001-11/2001	8	-3.0%	-11.7%	0.2%	-2.8%	-0.5%	20.2%
01/2008-06/2009	18	-8.1%	19.2%	16.5%	-24.9%	4.9%	24.0%
03/2020-04/2020	2	-9.9%	-9.2%	-16.2%	n/a	7.5%	57.3%
Average	**10.9**	-9.0%	31.5%	0.8%	-8.2%	3.5%	17.4%
Median	**9.5**	-9.0%	3.4%	-6.5%	-2.7%	2.2%	13.7%

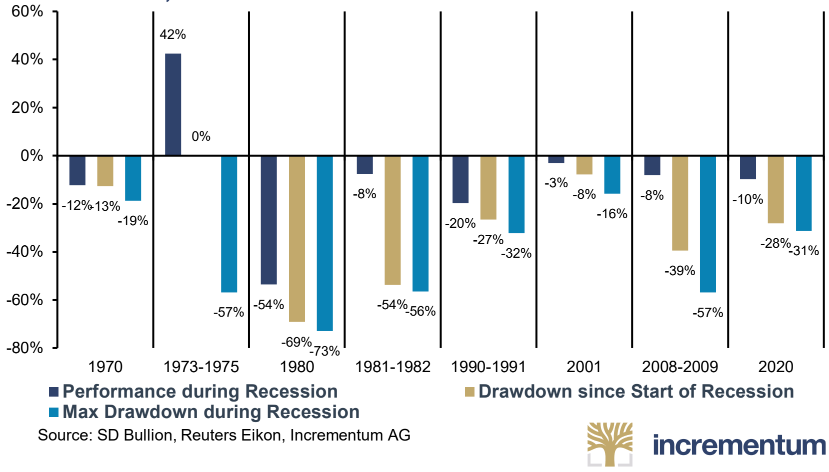
Source: Reuters Eikon, Incrementum AG

Our analysis shows that the dependence on industrial demand, which over the last few years accounted for around 50% of total silver demand, has had an impact on the performance of silver during a recession, causing it to lose an **average of 9.0% in value**. It is important to note that the variability of the numbers that make up the average should be considered. **Outliers are the recessions of 1973–1975 with a gain of 42.4% and the recession of 1980 with a loss of 53.5%.**

Why should we look to the past in order to prepare for the future? Because there is nowhere else to look.
James Burke

It should also be considered that silver has performed positively both at the beginning (phase 2) and end (phase 4) of past recessions, so that its true downside risks are masked when one looks only at its performance during the entire recession. The next chart illustrates this discrepancy between the performance and drawdowns of silver during a recession.

Performance and Drawdown of Silver during Recesssion, 01/1970-12/2022



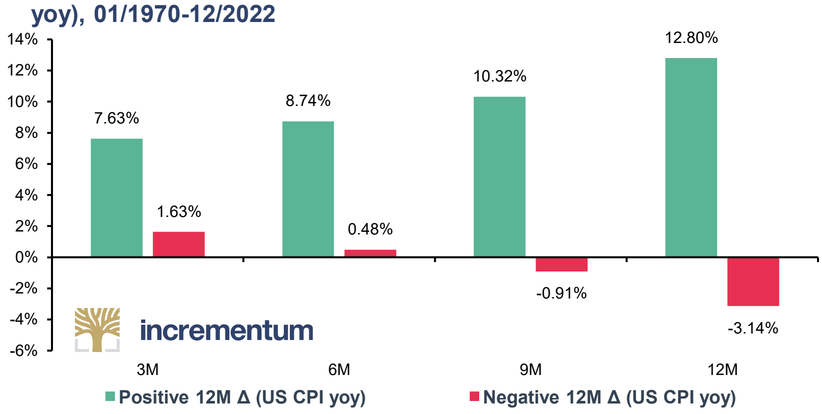
Source: SD Bullion, Reuters Eikon, Incrementum AG

In contrast to its performance during a recession, silver has been able to perform positively on average in the six months before and after a recession (phases 1 and 5). **The results are particularly impressive in phase 5, as silver increasingly benefits from reflation and economic recovery as an asset with high industrial demand.**

We have inflation because we have created more money out of thin air than is imaginable.
Matthew Piepenburg

To support this thesis, we conducted a detailed analysis of silver's performance in environments of rising and falling inflation. We used the 12-month change in year-on-year US CPI to measure the inflationary or deflationary trend. Following this, we calculated the CAGR for silver in the following 3, 6, 9, and 12 months. **The findings of this analysis show that silver shines during periods of rising inflation.**

Silver Performance (CAGR) on a 3M, 6M, 9M, 12M Look Ahead during Accelerating and Deccelerating Inflation (12M Δ US CPI yoy), 01/1970-12/2022



Source: Reuters Eikon, Incrementum AG

It ain't about how hard you're hit, it's about how you can get hit and keep moving forward.
Rocky Balboa

In summary, it can be said that silver performs well in the lead-up to and sometimes during the early stages of a recession. However, during a deep recession, its cyclical nature becomes apparent as it tends to suffer sharp and rapid losses in price. **This is often offset by its ability to quickly recover in the last phase of a recession and in the following months.**

Of course, there is no denying that a severe recession could shackle the silver price's potential growth, and it is possible that this suppression could be substantial. In any case, we expect the potential collateral damage experienced by the silver price to be limited by commitments to the green energy transition, even in the case of a severe recession. **Importantly, the above analysis contextualizes silver's historical performance in recessions, whilst serving as a cautionary note for (potential) silver investors.**

Conclusion

The best time to buy silver is when you have dollars.
The Young Pretender, Twitter

As we outlined throughout this chapter, the current market conditions are preferable for silver. Steadfast commitments to the green energy transition serve as a key battleground for silver industrial demand, which is the majority component of total silver demand. Here we find innovation in solar PVs to be an unwavering price floor for silver, as advances in new technologies, such as TOPCON and HJT, along with growing EV adoption, pave the way for continued increases in silver industrial offtake. **However, in the event of a recession, it must be noted that the extent of silver industrial demand will likely be compromised, as shown in our proprietary analysis.** Despite this, we posit that the potential downside price pressure from this driver will effectively be outweighed by more dominant factors, which function as upward price pressures, and manifest themselves with conviction in this current cycle.

The warden said: The exit is solid. If you want a way out, Silver and Gold.
U2, Silver and Gold

One of these dominant factors is silver's relationship with gold, which functions as the principal structural driver of the silver price in 2023. Here, gold is growing increasingly suspicious of Chairman Powell's rather unconvincing Paul Volcker impersonation and continues to tease its all-time high. As a monetary showdown looms, gold's propensity to venture into unchartered territory will likely result in an exaggeration of its little brother's historical undervaluation, which, if history is anything to go by, could propel silver to proportionately greater price increases.

Along with this phenomenon, there is also the silver supply dynamic. **We expect the prolonged absence of capital expenditure to be reflected in a future for the shiny metal that is characterized by unprecedented scarcity.** Ultimately, the extent to which this already gaping silver supply deficit is challenged by both industrial and investment demand will be the key determinants of silver outperformance in 2023 and the years that follow.

Come on you target for faraway laughter, come on you stranger, you legend, you martyr, and shine!
Pink Floyd

In terms of when this outperformance will take hold, **our proprietary model analysis shows that overweighting silver as part of a diversified portfolio can be particularly beneficial towards the end of a recession.** Of course, in the absence of a crystal ball, forecasting exactly "when" the silver price will rise is fraught with difficulty, to say the least. **What is less difficult to comprehend though, is that, in light of the factors discussed, the future of silver shines bright, arguably with a glow more radiant than previous bull markets.**

The Synchronous Bull Market Indicator

There will always be bull markets followed by bear markets followed by bull markets.

John Templeton

- **According to the logic of the *Synchronous Bull Market Indicator*, gold and equity markets move antagonistically. When stocks are engaged in a long-term bullish trend, gold is confined to a long-term bearish trend and vice versa.**

  As a result, since the 1970s, there have only been four successive long-term bullish trends in gold and the S&P 500:

  1) the gold bull market of the 1970s
  2) the equity bull markets of the 1980s and 1990s
  3) the gold bull market from September 2000 until September 2011
  4) the equity bull market from October 2011 until December 2021

- **In March 2023, the Synchronous Bull Market Indicator confirms a new secular gold bull market that started in January 2022.**

- **The primary factor behind these long-term trends is the rise or fall of investor confidence, specifically confidence in the robustness of the economy and the stability of the financial system. This is not merely a theoretical concept; it can be gauged and assessed, albeit indirectly.**

- **A strategy that follows these long-term confidence cycles can yield substantial additional returns compared to a pure buy-and-hold strategy.**

Dietmar Knoll
Dietmar Knoll is a banker and worked for four decades in corporate banking at Deutsche Bank AG, most recently as a restructuring expert in risk management advisory. In his retirement, he is researching the question of what really drives the price of gold.

The Synchronous Bull Market Indicator

In last year's *In Gold We Trust* report[74]**, the *Synchronous Equity and Gold Price Model* (SEGPM) was introduced, demonstrating that the price trends of US equities and gold in the past 50 years can be attributed to just two factors:** money supply development, which acts as the primary driver, and investor confidence, which serves as the control mechanism for the distribution of value between these two assets.[75]

The reason this ratio (the S&P 500 to Gold Ratio) is popular and worth monitoring is because it can easily gauge the 'mood' of the investment community. A low ratio indicates investors are feeling pessimistic about the outlook for the economy and financial markets, whilst a high ratio suggests investors are optimistic.
Perth Mint

Investor confidence is characterized as the trust investors have in the resilience of the economy and the stability of the financial system. While this metric cannot be assessed directly, a review of the trends over the past five decades indicates that the S&P 500/gold ratio is an appropriate and trustworthy substitute.

This year's article aims to furnish interested investors with an accessible tool that, leveraging the insights of the SEGPM, can be utilized to detect early and reliably secular bull markets for equities and gold, enabling investors to consistently execute an alternating trend-following strategy that is founded on factual evidence. **This tool will be called the *Synchronous Bull Market Indicator* (SBMI).**

Backtesting a strategy that follows the guidelines of the SBMI reveals that the potential return from this strategy surpasses the return of a pure buy-and-hold strategy (in stocks, gold, or a 50/50 allocation) by a factor of at least 15 over the past 50 years.

How are bull and bear markets officially defined?

The average man doesn't wish to be told that it is a bull or a bear market. What he desires is to be told specifically which particular stock to buy or sell. He wants to get something for nothing. He does not wish to work. He doesn't even wish to have to think.
Jesse L. Livermore

The US Securities and Exchange Commission (SEC) defines a bull market as: "A time when equity prices are rising and market sentiment is optimistic. Generally, a bull market occurs when there is a rise of 20% or more in a broad market index over at least a two-month period". Conversely, for a bear market, the same conditions apply but with the signs reversed.

While it's straightforward to verify whether an asset or market has experienced a rise or fall of 20% within a specified time period, assessing market sentiment, i.e., the collective mood of market participants, is a more complex undertaking.

The most prevalent method for capturing market sentiment is by conducting surveys of market participants. Additionally, market data such as trading volume, market volatility, or momentum may be utilized. Ultimately, the goal is to gather a summary sentiment assessment from the largest possible number of statistically reliable components.

Investors today have a range of different instruments to choose from. However, their statements and results frequently differ. Furthermore, there is almost always an inadequate long-term database, making a coherent cycle analysis extending back decades challenging. As a result, many investors ignore this critical

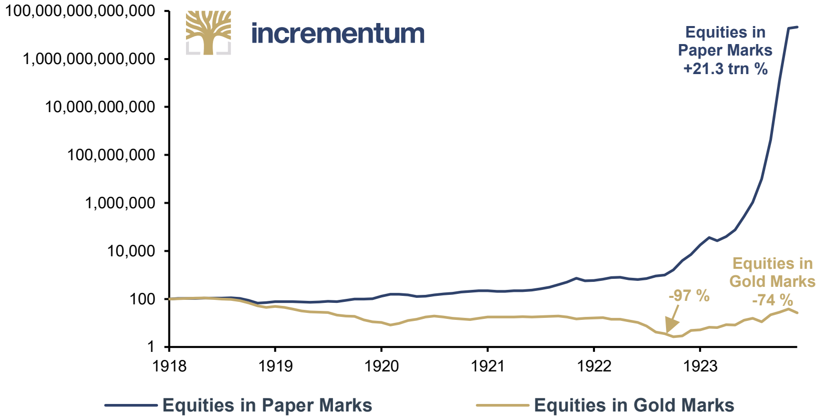
74 "The Synchronous Equity and Gold Price Model," *In Gold We Trust* report 2022
75 You can reach the author at knoll-dietmar@gmx.de.

component of the SEC definition, or they take optimistic market sentiment for granted, assuming that prices will continue to grow positively.

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

A result of this is that nearly any asset or market can transform into a bull market, as long as the currency used to measure prices is weak enough. Current examples of this thesis can be found in the equity markets of countries such as Venezuela or Turkey. The most impressive historical example, however, is the German equity market during the Weimar Republic. In the period from January 1918 to November 1923, the equity index of the *Statistisches Reichsamt*, which is quoted in paper marks, rose by around 21,300,000,000%. **But was the German equity market also trading in a bull market at that time?**

Equity Index of the *Statistisches Reichsamt*, in Paper Marks and Gold Marks (log), 100 = 01/1918, 01/1918-12/2023



Source: Wikipedia, Author's calculations, Incrementum AG

More paper money cannot make a society richer, of course, – it is just more printed-paper. Otherwise, why is it that there are still poor countries and poor people around?
Hans-Hermann Hoppe

A clear answer is obtained by quoting the equity index in gold marks. The equity index, measured in hard currency, had decreased by around 74% of its value by the time of the currency reform in November 1932. A year earlier, however, the loss of value, measured in gold marks, had reached a maximum of approximately 97%. Therefore, the supposed bull market turned out to be a bear market. In other words, the formal bull market was a result of the extreme devaluation of money. Investors fell victim to the *money illusion*, which is the confusion between the real and nominal value of money that can happen during times of high inflation.

Identifying secular bull markets reliably and at an early stage

To determine whether an asset is in a bull market, observing its price development only in currency terms is not sufficient due to the constant money supply inflation inherent in unbacked fiat money systems. Instead, it is more appropriate to use the relative performance of different asset classes as a basis to eliminate the disruptive influences of money supply inflation.

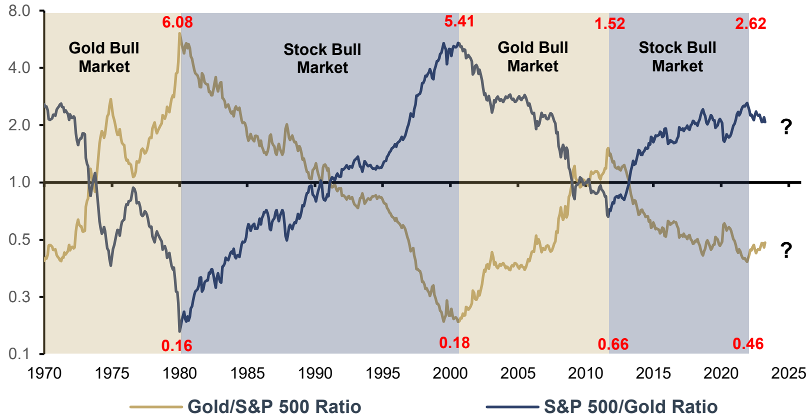
The *Synchronous Equity and Gold Price Model* has demonstrated a reliable and predictable correlation between the money supply and the prices of equities and gold for over 50 years, but only when these two asset classes are analyzed together.

This is mainly due to the fact that there are periods when gold gains more value than equities due to the money supply in the system, and other periods when the opposite occurs.

… it's worth pointing out that there have been previous attempts to link changes in the stock market and the gold price to changes in the money supply. These attempts failed. With regard to the stock market they failed because a strong positive correlation between the senior equity index and the money supply only exists during equity bull markets, that is, the money supply in isolation fails to account for the major swings in the stock market.
Steve Saville

Investors tend to purchase gold as a hedge against various economic and financial concerns such as increasing debt, inflation, a weakening US dollar, a recession, a stock market crash, or the need for a financial system reset. In contrast, stocks are commonly bought when the economy is robust, growth rates are high, outlooks are favorable, earnings are strong, unemployment rates are low, and inflation is moderate.

Gold/S&P 500 Ratio (log), and S&P 500/Gold Ratio (log), 01/1970-03/2023



Source: kitco.com, multpl.com, Author's calculations, Incrementum AG

[G]old and the S&P 500 are at opposite ends of a virtual investment seesaw. Due to their respective natures, if one is in a long-term bull market then the other must be in a long-term bear market.
Steve Saville

Thus, the SEGPM utilizes the S&P 500/gold ratio to gauge investor confidence. Not only is this a highly dependable tool, but it is also incredibly useful in identifying market sentiment for both equities and gold, and in recognizing key turning points for bull and bear markets in the long term.

The following table shows the performance of the S&P 500 and gold during bull markets. The respective development of the US M2 money supply is also shown.

Bull market	Duration	Gold in USD	p.a.	S&P 500 in points	p.a.	M2 in USD bn	p.a.
Gold	Jan 70	34.99		90.31		589.60	
	Jan 80	674.58		110.90		1,482.70	
	Increase	+ 1,828%	34.5%	+ 23%	2.0%	151%	9.8%
S&P 500	Feb 80	665.89		115.30		1,494.60	
	Aug 00	274.52		1,485.46		4,817.50	
	Increase	- 59%	-4.3%	+ 1,188%	13.6%	222%	6.0%
Gold	Sep 00	273.67		1,468.05		4,853.20	
	Sep 11	1,780.65		1,173.88		9,525.80	
	Increase	+ 551%	18.5%	- 20%	-2.0%	96%	6.3%
S&P 500	Oct 11	1,667.89		1,207.22		9,559.50	
	Dec 21	1,786.65		4,674.77		21,553.10	
	Increase	+ 7%	0.75%	+ 287%	14.5%	125%	8.5%

Source: Author's calculations, Incrementum AG

The best moves in precious metals (excluding the 1960s) all occurred during secular bear markets in US equities.
Jordan Roy-Byrne

The chart and table above provide clear evidence that secular gold bull markets are always accompanied by secular equity bear markets, and vice versa. Therefore, gold can be an excellent hedge against secular equity bear markets.

If there is still a small increase in the US dollar value of the respective bear market asset, this is only due to the decline in the value of the currency, which is brought about by the steady expansion of the US money supply.

Investor confidence as the key driver of all four secular market phases over the past 50 years.

… confidence, fairness, corruption, money illusion, and stories. These are real motivations for real people. They are ubiquitous. The presumption of mainstream macroeconomics that they have no important role strikes us as absurd.
Robert J. Shiller

The following is an attempt to describe the four previous secular bull markets of the past 50 years from the perspective of investor confidence:

1. Falling trend of the 1970s (low point of the S&P 500/gold ratio: 0.1644 in January 1980)

Concerns stemmed from a number of factors, including the decoupling of the US dollar from gold, which raised doubts about the stability of the global financial system. Contributing factors included the rapidly growing debt in the aftermath of the Vietnam War, the breakdown of the Bretton Woods system, the two oil price shocks, escalating inflation, and persistent economic weakness worldwide.

2. Rising trend of the 1980s/1990s (high point of the S&P 500/gold ratio: 5.411 in August 2000)

This trend was the result of an unprecedented period of wealth generation that benefited a large portion of the world. The drivers of this trend include the ascendance of neoliberalism in the Western world, the integration of China into the global economy, the collapse of the Soviet Union, the opening up of Eastern Europe, the rapid expansion of globalization, and the extraordinary growth of the IT sector.

3. Falling trend until 2011 (low point of the S&P 500/gold ratio: 0.6592 in September 2011)

This trend resulted from a sequence of existential crises. These crises were triggered by various drivers including the bursting of the equity market bubble at the beginning of the century, the terrorist attack of September 11, 2001, the subsequent War on Terror, the Global Financial Crisis and the subsequent economic crisis, as well as the sovereign debt crisis in Europe.

4. Rising trend until 2021 (preliminary high of the S&P 500/gold ratio: 2.6165 in December 2021)

No one knows how the greatest monetary policy experiment of all time will turn out. It is possible that the supposed omnipotence of central banks will eventually turn into impotence.
Flossbach von Storch

This trend resulted from *central bank omnipotence*. Formerly boring central banks evolved into powerful and political institutions. Whether it was the bank bailout, the euro crisis or the Covid-19 pandemic, central banks' actions proved decisive and successful, at least in the short term, in preventing economic systems, financial markets, and entire societies from a truly deep slide into existential crises.

Investment strategy implications

A sound investment strategy should be constructed based on a thorough assessment of the investor's unique financial position and must be in line with their personal investment goals. Such an individually tailored investment strategy should also allow for some flexibility. For example, the allocation to equities or precious metals may be adjusted based on the overall economic environment. This approach can help to ensure that the investment strategy remains aligned with the investor's goals and objectives.

The *Synchronous Bull Market Indicator* (SBMI) can provide valuable services when it comes to determining this allocation. Investing in gold with the flexible part of a portfolio may not make sense when financial markets are characterized by confidence and trust. This is because the opportunity costs, in the form of lost equity market returns, can quickly exceed the potential price losses of a crisis that might occur in the future.

On the other hand, when it comes to equities, there is often an overwillingness to accept temporary losses with the argument that their prices have always risen in the long run. This overlooks the fact that, despite high inflation, it can sometimes take decades before old nominal highs are reached and surpassed again after a market crash. Thus opportunity costs in the form of lost increases in the value of gold may quickly grow.

Fundamental Insights Lead to the SBMI

In the business world, the rearview mirror is always clearer than the windshield.
Warren Buffett

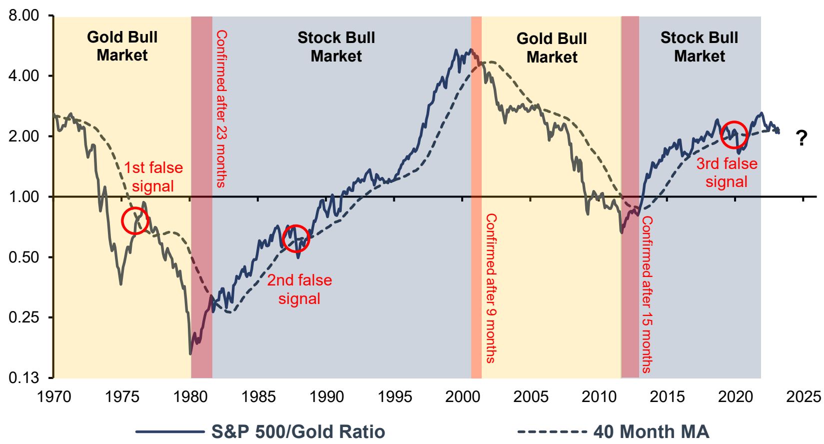
Investor confidence, like the economy, operates in short-term and long-term cycles. However, the inflection points of secular bull markets, which are critical for successful investing, can only be determined with absolute certainty in retrospect. Nonetheless, investors must make their decisions in advance.

A reliable method to determine secular trends in investor confidence in a timely manner is by comparing the current S&P 500/gold ratio with its longer-term average. If the present ratio is lower than this longer-term average, it indicates a decreasing trend, while a ratio above the average suggests an increasing trend in confidence. The longer-term the average is formed, the more reliable the results are. However, waiting for confirmation of a trend change may mean that gains from the new trend will be missed due to adherence to the old, already expired trend. Investors must try to anticipate the trend in advance, but the turning points of secular bull markets that are essential for successful investment can be difficult to pinpoint.

It is better to be roughly right than precisely wrong.
John Maynard Keynes

A method is therefore sought that indicates the trend reversal as promptly and reliably as possible and largely avoids false signals (meaning trend reversals that are initially indicated but not confirmed later). **The SBMI uses the comparison of the S&P 500/gold ratio with its 40-month moving average to achieve this goal.**

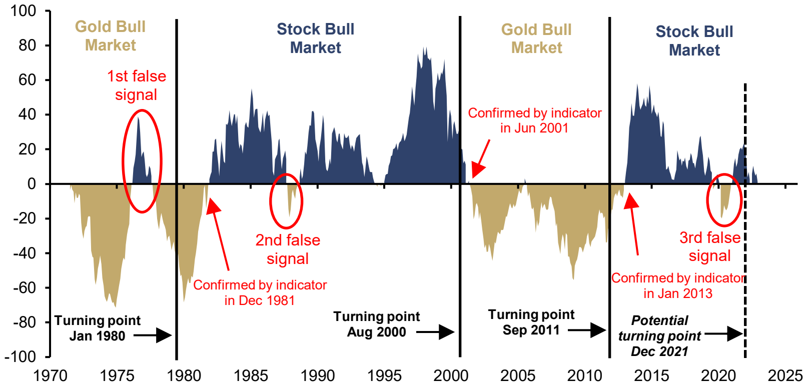
S&P 500/Gold Ratio (log), 01/1970-03/2023



Source: kitco.com, multpl.com, Autho's calculations, Incrementum AG

All three trend reversals of the past 50 years are reliably confirmed, and the time lag remains reasonable at around 1 to 2 years. A chart that is easier to interpret can be obtained by displaying the percentage deviation of the current S&P 500/gold ratio from its 40-month moving average, instead of showing the development of the ratio itself.

The SBMI: Deviation from 40 Months MA of S&P 500/Gold Ratio, 01/1970-03/2023



Source: kitco.com, multpl.com, Author's calculations, Incrementum AG

The longer the bull market lasts the more severely investors will be affected with amnesia; after five years or so, many people no longer believe that bear markets are possible.
Benjamin Graham

A bull market in equities (blue areas) is indicated when the current ratio is above its 40-month moving average. Conversely, a bull market in gold (yellow areas) is indicated when the current ratio is below its moving average. This representation method has a significant advantage: The strength of each bull market, indicated by the amplitude of the percentage deviation from the 40-month moving average, is clearly visible. This is important because a small deviation from the moving average may not provide enough evidence of a trend reversal.

Trend reversal points in investor confidence are central to the SBMI. What insights can be gathered from history?

Courtesy of Hedgeye

The initial observation is that, to date, the secular turning points of investor confidence have always aligned with the respective last peaks of the prevailing bull market asset: The first instance occurred in January 1980 with the peak of the gold price averaging USD 675 per month; the second was in August 2000 with the peak of the S&P 500 averaging 1,485 points per month; and the third was in September 2011 with the peak of gold averaging USD 1,781 per month.

The gold bull market of the 1970s and the equity bull market of the 1980s and 1990s share the commonality that the substantial increase in the respective bull market asset eventually led to significant exaggeration or a bubble. Consequently, the trend reversal in each case resulted from the crash of the bull market asset rather than the emerging strength of a counterpart. However, in both instances, the crash did not occur until 2-3 years later.

The trend reversal in September 2011 was different, as it arose from the emerging strength of the equity market. Unlike in the previous cases, the price of the former bull market asset, gold, remained quite stable for more than a year after its cycle high, while the S&P 500 rose by more than 20% during that period.

Over the past 50 years, there have been a total of three instances of false signals. What are their similarities?

Central banks have gotten out of the central banking business and into the central planning business, meaning that they are devoted to raising up-if they can-economic growth and employment through the dubious means of suppressing interest rates and printing money. The nice thing about gold is that you can't print it.
James Grant

The initial false signal occurred due to a significant decline in the price of gold, which fell from around USD 184 in December 1974 to approximately USD 110 in August 1976. This was brought about by fundamental shifts in the gold market, most notably the lifting of the ban on gold ownership in the United States and the decision by the US and the IMF to restructure the global monetary system without gold's playing a central role, leading to sizeable gold auction sales. Moreover, the 1974 recession appeared to be over, and global equity prices experienced a temporary surge.

However, the great uncertainty that arose after the failure of the Bretton Woods system had made itself felt again by September 1976. Continued currency crises, monetary interventions, and economic dysfunctions were unmistakable signs. This ultimately resulted in the incredible second phase of the gold bull market, which propelled the price of gold to USD 675 by January 1980.

The two other false signals were both triggered by an equity market crash: Black Monday on October 19, 1987, and the Covid-19 crash in 2020. In both cases, the equity bull market had been running for several years and had become relatively weak. The memory of the Federal Reserve's role in managing the Covid-19 crisis is still fresh in people's minds. However, this is likely no longer the case with regard to Black Monday. Following the crash, then-Federal Reserve Chairman Alan Greenspan issued a strong statement on October 20, 1987: "*The Federal Reserve, consistent with its responsibilities as the Nation's central bank, affirmed today its readiness to serve as a source of liquidity to support the economic and financial system*".

The Federal Reserve resuscitated the bull market in both cases. Some 15 months after Black Monday, the S&P 500 was back at its pre-crash high. In the course of the Covid-19 crisis, the reflation required only a record-breaking six months.

The world changes! So we're in a situation today where the only policymakers that have flexibility are central banks. But they don't have the instruments! So they've had to experiment, and the more you experiment, the more uncertainty and the higher the risk of collateral damage.
Mohammed El Erian

Ultimately, then, it can be argued that it was the Federal Reserve that restored confidence in financial markets with its unlimited monetary firepower. As a result, the "Fed put" narrative has been alive and well for 35 years. The primary beneficiary of this insurance against asset losses has been the equity market. Thus, many investors perceive this narrative as an inevitable force of nature, as there are almost no equity traders left who are acquainted with any central bank intervention that strays from it. "Buy the dip" is then the logical response.

In the 1970s the situation was vastly different, as the Federal Reserve's ability to create unlimited new US dollars after the dollar was detached from gold did not increase confidence, nor did it lead to steadily rising equity prices. Rather, it was the source of vehement mistrust and fueled a historically unprecedented explosion in the price of gold.

How great would the investment success have been for an investor who consistently followed the recommendations of the SBMI?

You don't have to be brilliant, only a little bit wiser than the other guys, on average, for a long, long time.
Charlie Munger

To reiterate, the SBMI identifies bull markets for either equities or gold by comparing the current S&P 500/gold ratio, using monthly average prices, with its 40-month moving average. If the current value exceeds the 40-month moving average, then there is generally a bull market for equities, while if the current value falls below the moving average, then there is a bull market for gold.

To achieve a clear and robust course of action and eliminate slight distortions, rebalancing of the adaptable part of the portfolio ought to occur only when the disparity of the present S&P 500/gold ratio from its 40-month moving average exceeds the range of plus or minus 5%.

The following table starts with an initial investment of one ounce of gold and shows all reallocations in detail. Additional investments were not considered.

Reallocations											Holdings	
									S&P 500	**Gold Price**	**S&P 500**	**Oz Gold**
	Jul 71	Start	1.00	Oz Gold						42.40		1.00
1.	Apr 76	Sell	1.00	Oz Gold	Buy	1.26	S&P 500		101.90	127.91	1.26	
2.	Oct 77	Sell	1.26	S&P 500	Buy	0.74	Oz Gold		93.74	158.85		0.74
3.	Jan 82	Sell	0.74	Oz Gold	Buy	2.43	S&P 500		117.30	384.16	2.43	
4.	Nov 87	Sell	2.43	S&P 500	Buy	1.27	Oz Gold		245.00	468.14		1.27
5.	Oct 88	Sell	1.27	Oz Gold	Buy	1.86	S&P 500		277.40	406.39	1.86	
6.	Aug 01	Sell	1.86	S&P 500	Buy	8.04	Oz Gold		1,178.50	272.66		8.04
7.	Feb 13	Sell	8.04	Oz Gold	Buy	8.67	S&P 500		1,512.31	1,630.69	8.67	
8.	Mar 20	Sell	8.67	S&P 500	Buy	14.44	Oz Gold		2,652.39	1,591.93		14.44
9.	Feb 21	Sell	14.44	Oz Gold	Buy	6.72	S&P 500		3,883.43	1,808.18	6.72	
	Jul 71	**Starting Investment**										**1.00**
	Mar 23	**Current Value/Holding**									**6.72**	

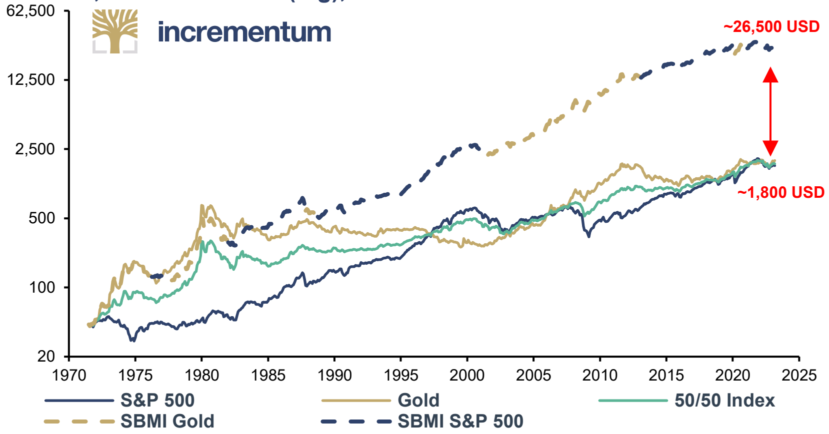
Source: Author's calculations, Incrementum AG

The next chart shows the backtesting of the trend-following model based on the recommendations of the Synchronous Bull Market Indicator compared to

1) a pure equity investment
2) a pure gold investment
3) a 50/50 approach.

The initial investment in all four variants is USD 42.40, the average price for an ounce of gold in July 1971.

Backtest: Trend Following Model SBMI, S&P 500, Gold, and 50/50 Index, 42.40 = 07/1971 (log), 07/1971-03/2023



Source: kitco.com, multpl.com, Author's calculations, Incrementum AG

Additionally, let's look at a numerical overview of the percentage performance of all four investment alternatives, broken down by five individual decades and the entire investment period:

		S&P 500	Gold	50/50 Index	Trend Following SBMI
				1xS&P + 1.5 Oz Gold	
1971 - 1981	**07/1971**	99.00	42.40	162.60	42.40
	12/1981	123.80	410.12	738.98	303.49
	Delta	24.80	367.72	576.38	261.09
	in %	**25.05**	**867.26**	**354.48**	**615.78**
	% p.a.	**2.17**	**24.34**	**15.64**	**20.80**
1981-1991	**12/1981**	123.80	410.12	738.98	303.49
	12/1991	388.51	361.88	931.33	722.63
	Delta	264.71	-48.24	192.35	419.14
	in %	**213.82**	**-11.76**	**26.03**	**138.11**
	% p.a.	**12.12**	**-1.24**	**2.34**	**9.06**
1991 - 2001	**12/1991**	388.51	361.88	931.33	722.63
	12/2001	1,144.93	275.99	1,558.92	2,218.96
	Delta	756.42	-85.89	627.59	1,496.33
	in %	**194.70**	**-23.73**	**67.39**	**207.07**
	% p.a.	**11.41**	**-2.67**	**5.29**	**11.87**
2001 - 2011	**12/2001**	1,144.93	275.99	1,558.92	2,218.96
	12/2011	1,243.32	1,652.73	3,722.42	13,287.95
	Delta	98.39	1,376.74	2,163.50	11,068.99
	in %	**8.59**	**498.84**	**138.78**	**498.84**
	% p.a.	**0.83**	**19.60**	**9.09**	**19.60**
2011 - 2021	**12/2011**	1,243.32	1,652.73	3,722.42	13,287.95
	12/2021	4,674.77	1,786.65	7,354.75	31,414.45
	Delta	3,431.45	133.92	3,632.33	18,126.51
	in %	**275.99**	**8.10**	**97.58**	**136.41**
	% p.a.	**14.16**	**0.78**	**7.05**	**8.99**
1971 - 2023	**07/1971**	99.00	42.40	162.60	42.40
	03/2023	3,968.56	1,912.73	6,837.66	26,668.72
	Delta	3,869.56	1,870.33	6,675.06	26,626.32
	in %	**3,908.65**	**4,411.16**	**4,105.20**	**62,797.93**
	% p.a.	**7.41**	**7.65**	**7.50**	**13.28**

Source: Author's calculations, Incrementum AG

Both charts make it clear that consistently following the recommendations of the SBMI with a flexible portion of your portfolio, translates into taking good advantage of the secular trends in investor confidence and achieving a truly exceptional result with only a few investment decisions.

Where Are We Today?

Gold's Perfect Storm investment thesis argues that gold is at the beginning of a multiyear bull market with 'a few hundred dollars of downside, and a few thousand dollars of upside'. The framework is based on three phases: testing the limits of monetary policy, testing the limits of credit markets, and testing the limits of fiat currencies.
Diego Parilla

From a purely technical perspective, the last trend change towards gold – the penultimate interim high in the S&P 500/gold ratio of 2.42 in September 2018 – turned out to be a false signal at the beginning of 2021, as the stock market was able to outperform the gold price again from mid-2020 onwards – after a temporary weakness at the beginning of the Covid-19 pandemic. The last high in investor confidence was in December 2021 with an S&P 500/gold ratio of 2.62. Since then, investor confidence has been falling, i.e. gold is outperforming the S&P 500.

In January 2023, the current S&P 500/gold ratio was again noticeably below its 40-month average. After a short reversal in favour of the S&P 500 in February, there is again an indication of a new secular gold bull market in March. However, at 3.7%, the undershooting of the 40-month average remains below the 5% action trigger.

The Federal Reserve must choose between inflation and market chaos.
The Economist

In this respect, the development of the next few months remains extremely exciting. If investor confidence continues to decline and the performance advantage for gold thus also solidifies, the third secular gold bull market since 1970 should become established. In view of the trends towards de-globalization that have been evident for some time now, the already existing weakness in global growth, the potential for a tumultuous shift to a multipolar world order where China and Russia challenge the dominance of the US, and mounting tensions in the global financial system, including the overt use of the US dollar as a weapon, it is not unreasonable to expect an extended period of declining investor confidence worldwide.

All the more so as doubts are increasingly emerging as to whether Western central banks can actually successfully curb inflation without plunging the world into a deep recession or jeopardizing the stability of the financial system.

What Are the concrete Prospects of the emerging new Gold Bull Market?

First of all, it should be noted that historical empirical values naturally offer no guarantee for future developments. Nevertheless, the following forecasts seem obvious:

- **On the length of the new gold bull market:** Since the early 1970s, every secular bull market - whether for gold or the S&P 500 - has lasted at least 10 years. In this respect, it is reasonable to assume that the new gold bull market that started at the beginning of 2022 should also continue at least until the end of 2030.

- **On the development of the confidence level:** The first gold bull market in the 1970s started from a comparatively high level of investor confidence (83% percentile) and declined in the further course to the all-time low. The second gold bull market starting in September 2000 started at the all-time high in investor confidence and declined to a severely below-average level (25% percentile) as it progressed.

The current gold bull market starts again at a high confidence level, which roughly corresponds to the initial situation at the beginning of the 1970s. If the decline in confidence in the new gold bull market is to be defined as the average of the previous two secular lows in the preceding cycles, the S&P 500/gold ratio would arithmetically be 0.41 (10% percentile). A second assumption would be that the loss of confidence is no greater than in 2008, when the S&P 500/gold ratio bottomed out at 0.66 (25% percentile).

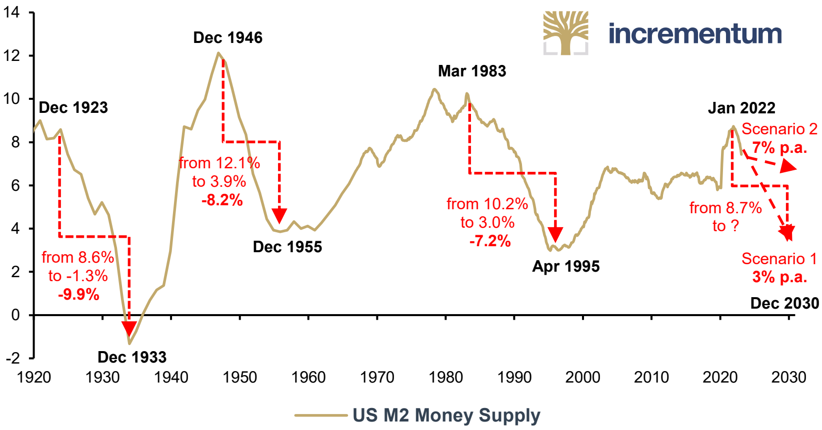
On a concrete price forecast for the S&P 500 and gold for the end of 2030

The S&P 500/gold ratio by itself says nothing about the prices of both assets, but only something about the exchange ratio. However, with the help of the Synchronous Equity and Gold Price Model presented in the *In Gold We Trust* report 2022, concrete price targets can be derived, provided that, in addition to the S&P 500/gold ratio – as a control valve for value allocation – a projection is also made regarding the M2 money supply – as the basic driver of asset prices.

Rapid increases in the quantity of money produce inflation. Sharp decreases produce depression.
Milton Friedman

As the wild roller coaster ride of money supply development since 2020 at the latest shows – +27% yoy in February 2021, -2.4% yoy in February 2023 - , M2 is hardly reliable to predict in the short run. In the long run, however, historical cycles exist that can be used for forecasting. Below is the annualized 8-year rate of change of M2 money supply, i.e. exactly for the period remaining until the end of 2030.

US M2 Money Supply, Annualized Rolling 8-Year Change, in %, 01/1920-02/2023



Source: Federal Reserve St. Louis, longtermtrends.com, Author's calculations, Incrementum AG

Quantitative easing is NOT going away. Every major country is running a deficit. If they are all net borrowers then who is the lender? The central banks. For this reason – QE is not going away for a long time.
Jeffrey Gundlach

If the current oscillation pattern continues, a sharply declining growth rate of around 3% p.a. would be expected for the next 8 years. Against the background of a consistent fight against inflation by the Federal Reserve and then probably also restrictive lending by US commercial banks, such a value would be quite plausible.

However, if the Federal Reserve is forced to rescue the economy or the financial system, this could lead to permanently high money supply growth. As the chart above shows, the 8-year growth rate in the inflationary phases of the 1970s and 1980s was over 10% p.a. In this respect, an inflationary growth rate of 7% p.a. would not be implausible for such a case.

For a well-founded price estimate, it is therefore appropriate to calculate at least four different scenarios:

Money supply growth 3%p.a. ≈ money supply of USD 26,900bn in 2030:

Low point in investor confidence	Forecast S&P 500	Forecast Gold Price
Mean (0.41)	~1,920	~ USD 4,700
Similar to 2008 (0.66)	~2,740	~ USD 4,150

Money supply growth 7%p.a. ≈ money supply of USD 36,500bn in 2030:

Low point in investor confidence	Forecast S&P 500	Forecast Gold Price
Mean (0.41)	~2,600	~ USD 6,350
Similar to 2008 (0.66)	~3,720	~ USD 5,630

Essentially, all models are wrong, but some are useful.
Georg Box

The great advantage of the Synchronous Equity and Gold Price Model is that the S&P 500 and gold are "thought" together and therefore every forecast for the S&P 500 also automatically yields a gold price forecast and vice versa. However, it is a prerequisite that a determination is made on the money supply, because it alone determines the joint value of both assets.

It may puzzle that this simple correlation between the money supply and the value of a joint asset of the S&P 500 and 1.5 ounces of gold should actually exist. And likewise that this relationship has apparently received no attention to date. The fact is, however, that the deviations between the model and reality over the past 40 years have been merely within the following ranges:

Deviation Range	Months within Range	in % of all months
+/- 20%	454	95%
+/- 15%	349	73%
+/- 10%	258	54%
+/- 5%	162	34%

And this across all different economic cycles, capital market phases, bank credit cycles, and monetary and fiscal policy targets and measures.

Can the recommendations of the SBMI be applied directly to markets outside the United States?

Courtesy of Hedgeye

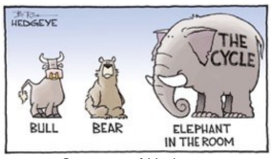
Basically, it is appropriate to attribute the exchange ratio respectively the relative valuation of equities and gold to five factors:

1) global economic and confidence trends
2) local economic and confidence trends
3) the composition and quality of the companies included in the index
4) the gold price in USD
5) the exchange rate development of the local currency.

If a local equity index is compared to the price of gold in local currency, it eliminates the last two factors. The same result could be attained by "converting" the local equity index into US dollars and comparing it with the price of gold in US dollars.

The impact of global economic and confidence trends is somewhat uniform across the world. As a result, the only factors that could result in differences in equity index performance are the local economic and confidence circumstances, which are critical in the long run for determining the structural success or failure of companies within a given economic area, as well as the composition of the local index.

Since the currency-adjusted gold price is the same worldwide, it is logical that equity markets of different strengths would cause different trend reversal points and shift recommendations based on the equity/gold ratio.



Courtesy of Hedgeye

Below is a global heat map showing the bull market status for equities and gold. The blue and gold colors indicate the presence of bull markets for equities or gold, respectively; and the percentages represent the deviation of the current equity/gold ratio from its 40-month moving average, which is a measure of the relative strength of the bull market.

"Synchronous Bull Market Indicator" for Important Stock Indices

	G7							BRICS					Sonstige	
	Monthly Average S&P 500	Monthly Closings TSX Comp.	Monthly Closings Nikkei	Monthly Closings Kurs-Dax	Monthly Closings FTSE 100	Monthly Closings CAC 40	Monthly Closings FTSE MIB	Monthly Closings IBOVESPA	Monthly Closings RTS	Monthly Closings BSE Sensex	Monthly Closings SSE Comp	Monthly Closings FTSE JSE	Monthly Closings SMI	Monthly Closings STOXX 600
08/2021	20.1 %	7.7 %	2.7 %	2.8 %	9.5 %	5.9 %	5.1 %	12.0 %	2.0 %	18.7 %	2.9 %	1.4 %	10.0 %	5.1 %
09/2021	21.0 %	9.3 %	8.1 %	1.8 %	7.2 %	6.0 %	6.5 %	21.3 %	12.9 %	24.4 %	8.3 %	3.6 %	5.3 %	4.1 %
10/2021	19.6 %	15.4 %	2.2 %	3.5 %	4.1 %	9.5 %	10.1 %	28.6 %	18.3 %	21.6 %	7.4 %	0.5 %	9.9 %	7.5 %
11/2021	21.7 %	7.8 %	2.6 %	4.0 %	10.3 %	3.5 %	1.7 %	30.4 %	0.6 %	14.5 %	6.6 %	3.8 %	7.0 %	0.5 %
12/2021	23.9 %	12.8 %	0.1 %	2.7 %	2.9 %	11.7 %	9.2 %	25.7 %	4.1 %	18.3 %	8.9 %	4.5 %	14.9 %	7.5 %
01/2022	19.0 %	12.4 %	5.0 %	0.1 %	1.1 %	9.0 %	6.7 %	17.2 %	15.1 %	17.9 %	1.7 %	8.8 %	7.6 %	3.2 %
02/2022	12.9 %	6.3 %	11.6 %	11.4 %	6.1 %	1.8 %	4.3 %	14.8 %	61.6 %	6.4 %	0.5 %	3.9 %	0.8 %	5.5 %
03/2022	6.4 %	10.1 %	13.2 %	13.3 %	7.8 %	3.8 %	7.7 %	5.2 %	45.6 %	8.5 %	8.2 %	10.9 %	0.5 %	6.3 %
04/2022	6.9 %	3.6 %	19.3 %	18.2 %	9.6 %	8.8 %	13.4 %	17.1 %	31.4 %	6.6 %	15.5 %	0.2 %	3.4 %	10.8 %
05/2022	2.7 %	8.7 %	13.2 %	13.3 %	4.2 %	4.3 %	7.2 %	4.6 %	9.7 %	6.2 %	8.9 %	5.5 %	2.5 %	6.9 %
06/2022	0.1 %	1.5 %	19.5 %	23.2 %	11.0 %	12.8 %	19.6 %	22.0 %	17.1 %	0.9 %	1.8 %	6.0 %	8.3 %	15.0 %
07/2022	5.7 %	7.4 %	10.1 %	17.5 %	3.3 %	3.6 %	13.8 %	11.2 %	11.6 %	13.3 %	2.5 %	0.3 %	0.7 %	6.8 %
08/2022	10.4 %	5.8 %	9.9 %	19.9 %	6.1 %	6.9 %	15.5 %	6.2 %	6.3 %	19.4 %	3.4 %	1.3 %	3.2 %	10.2 %
09/2022	7.2 %	0.9 %	17.6 %	23.6 %	11.5 %	11.8 %	18.4 %	4.0 %	8.2 %	15.6 %	8.4 %	8.2 %	6.4 %	15.4 %
10/2022	4.7 %	7.3 %	12.5 %	13.3 %	3.4 %	0.8 %	7.3 %	8.3 %	1.3 %	22.2 %	12.6 %	3.3 %	0.8 %	7.0 %
11/2022	6.0 %	6.3 %	11.3 %	7.8 %	0.3 %	4.1 %	1.6 %	2.4 %	4.4 %	20.1 %	8.8 %	10.1 %	0.3 %	2.9 %
12/2022	1.4 %	2.5 %	15.0 %	10.4 %	3.2 %	0.3 %	4.8 %	4.9 %	32.7 %	9.8 %	11.0 %	3.8 %	3.7 %	5.8 %
01/2023	3.4 %	0.1 %	14.5 %	6.2 %	2.1 %	5.4 %	2.7 %	2.1 %	30.9 %	2.2 %	8.8 %	4.0 %	3.7 %	3.3 %
02/2023	2.1 %	0.8 %	13.0 %	1.8 %	3.4 %	11.3 %	9.4 %	6.6 %	34.4 %	5.6 %	5.5 %	2.0 %	2.0 %	1.5 %
03/2023	3.7 %	6.7 %	15.4 %	4.9 %	4.7 %	6.5 %	2.6 %	12.6 %	37.1 %	1.4 %	11.9 %	4.3 %	6.8 %	4.1 %

When examining the past twelve months, a trend emerges where the previously dominant equity bull market is gradually transitioning to a

gold bull market. On the other hand, the strength of the local gold bull markets is currently relatively weak, which means that the potential reversal is not a certainty.

Three simple conclusions that you should consider:

Bull markets are more fun than bear markets.
Bob Farrell

- Regardless of whether you consider gold to be a barbaric relic or equity markets to be gambling casinos, success in investing in both depends on investor confidence.
- If the SBMI for the US market suggests an occasional reallocation, it's important to check whether the indicated confidence shift is also present globally. If there is any doubt, it may be best not to rush the rebalancing. After all, a few months are unlikely to have a significant impact on sustained success in a secular trend.
- If your investment focus is outside the US, it is important to monitor investor confidence in relevant markets and react accordingly. However, you should always keep an eye on US markets. This is because the US has a dominant share of global equity market capitalization and the COMEX and the US dollar are important factors in global gold pricing. As a result, most global influences on capital markets tend to originate from the United States.

Caledonia Mining Corporation Plc

A highly profitable, cash generative, multi-asset gold producer & explorer with a strong growth profile in Zimbabwe

- Central Shaft: Significant increase in production
- Record gold production in 2022 of 80k oz at Blanket Mine
- Committed to returning value to shareholders through dividends
- Attractive new acquisitions in Zimbabwe

Strategy & Outlook

Growth supported by cash generation from stable production at Blanket

Start to progress new assets

Balance shareholder returns through dividends and investing in growth

Continuing strategy to become a multi-asset gold production in Zimbabwe

IGWT Report

Mining Stocks – Fundamental and Technical Position

Whether we're talking about socks or stocks, I like buying quality merchandise when it is marked down.

Warren Buffett

- The previous year in the mining space resembled a stomach-churning ride on a roller coaster. The ups and downs put even volatility-tested gold investors to the test.
- The value proposition of mining stocks has continued to improve, but so far the market is still largely ignoring the profitability that has been rediscovered.
- The global wave of inflation did not stop at the mining sector. Global all-in sustaining costs (AISC) of gold producers reached a new record high in 2022, rising 18% yoy to USD 1,276 per ounce.
- Should the gold price remain firm, gold mining companies will continue to generate high margins despite ongoing inflationary pressures.
- Within the commodities sector, no other industry is currently reporting higher margins than precious metals producers.
- Despite the recent wave of consolidations (Kirkland Lake & Agnico Eagle, Newmont & Newcrest...), gold production is still one of the most fragmented industries.
- Producers' burgeoning cash flows will lead them to replenish their dwindling reserves through M&A. The biggest profiteers from this development will be junior producers, fully funded developers, and explorers with world-class discoveries in Tier 1 regions. We also expect increasing M&A activity in the copper sector.

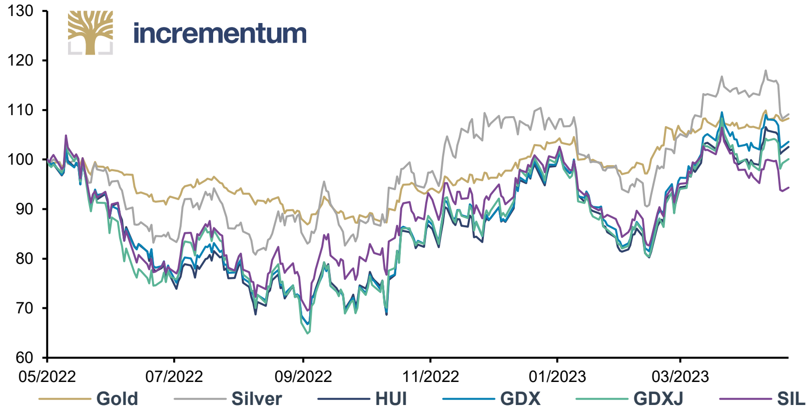
The Year in Review and Status Quo

God, grant me the serenity to accept the things I cannot change, the courage to change the things I can, and the wisdom to know the difference.
Alcoholics Anonymous motto

The previous year in the mining space resembled a stomach-churning ride on a roller coaster. The ups and downs put even volatility-tested gold investors to the test. **Last year, we wrote here:** *"After large losses had to be accepted in the past weeks – and contrary to the positive seasonality – a summer setback could offer excellent entry opportunities in line with the seasonal course of the miners."*[76]

This forecast proved to be accurate. After the publication of the *In Gold We Trust* report 2022 on May 24, 2022, a pronounced phase of weakness set in, which ended in late summer with a drop of more than 30%. This was followed by a spectacular rally in which mining indices nearly doubled. Over a 12-month period, the major mining indices are effectively +/- 0%. **Thus, it was once again evident that returns are the reward for exploiting volatility.**

Gold, Silver, HUI, GDX, GDXJ and SIL, 100 = 05/24/2022, 05/2022-05/2023



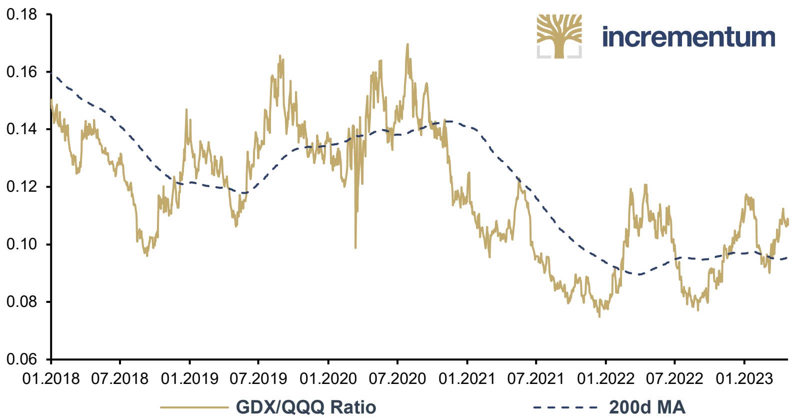
Source: Reuters Eikon, Incrementum AG

There is no security on this earth. Only opportunity.
General Douglas MacArthur

In the meantime, interest in the mining sector had increased noticeably, but the sector was unable to escape the general risk aversion on the stock market. Once again, it was confirmed: Mining stocks have a strong equity-market risk. If we look at the relative strength of mining stocks (GDX) compared to the former leading sector of the stock market, technology stocks (QQQ), we can see that mining stocks have gradually gained relative strength, and the ratio is now clearly above the 200-day line.

[76] "Mining Shares – Fundamental and Technical Status Quo," *In Gold We Trust* report 2022, p. 315

GDX/QQQ Ratio, 01/2007-04/2023

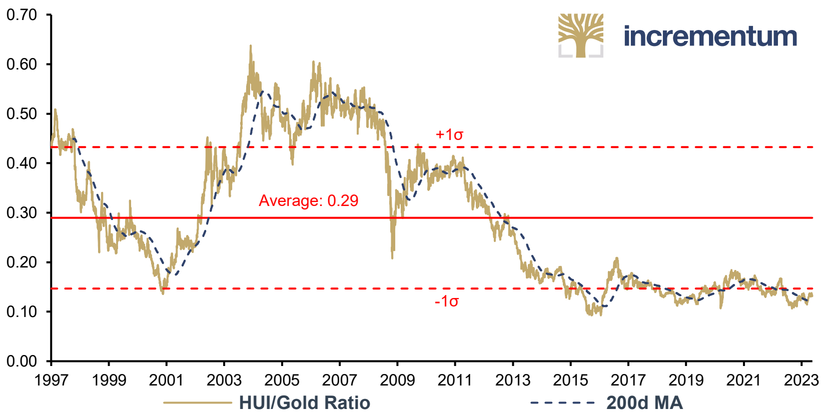


Source: Crescat Capital LLC, Tavi Costa, Reuters Eikon, Incrementum AG

Perseverance is rewarded sooner or later – but usually later.
Wilhelm Busch

Moreover, it is worth taking a look at the relative valuation of mining stocks compared to gold. In bull markets, gold stocks tend to trade at a premium to gold. The HUI/gold ratio indicates that gold stocks have been trading at one standard deviation below the mean for 8 years now. Also based on this indicator, gold stocks appear to be undervalued.

HUI/Gold Ratio, 01/1997-05/2023



Source: Reuters Eikon, Incrementum AG

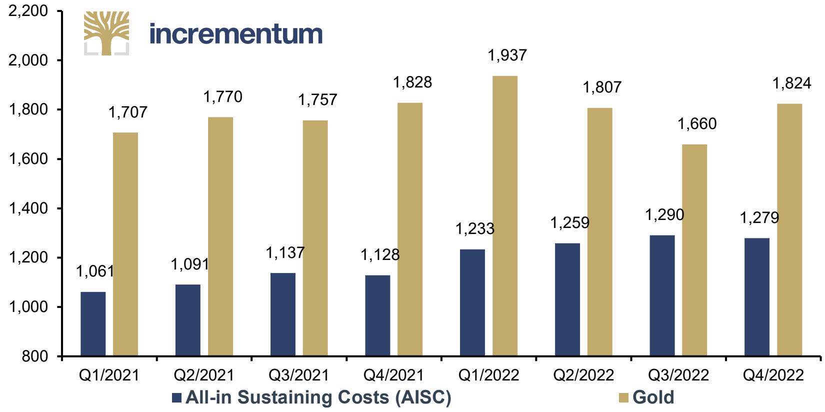
The great merit of gold is precisely that it's scarce, that its quantity is limited in nature, that it's costly to discover, to mine, and to process and that it cannot be created by political fiat or caprice.
Henry Hazlitt

Of course, the global wave of inflation did not stop at the mining sector. Global all-in sustaining costs (AISC) of gold producers reached a new record high in 2022, rising 18% yoy to USD 1,276 per ounce. A combination of increased input costs (energy, steel, explosives…) and higher gold prices, which make it profitable to mine more expensive deposits, was responsible. The tight situation on the labor market also led to higher personnel costs.

Despite record high costs for the gold mining industry last year, there was some relief in Q4/2022. Analysis from our friends at Metals Focus shows that global average AISC fell in Q4/2022 for the first time in 2022, by 0.9% qoq to USD 1,279/oz. This was driven by an increase in average ore grades, which reduced unit costs. Oil and gas prices also fell in the second half of 2022. If the industry has succeeded in maintaining ore grades at current levels, this may have led to a further decline in average AISC in Q1/2023. **Should the gold price remain**

firm, gold mining companies will continue to generate high margins despite ongoing inflationary pressures.

All-in Sustaining Costs (AISC), in USD per Troy Ounce, and Gold, in USD, Q1/2021-Q4/2022



Source: Metals Focus Gold Mine Cost Service, Reuters Eikon, Incrementum AG

Mining Stocks as Value Plays?[77]

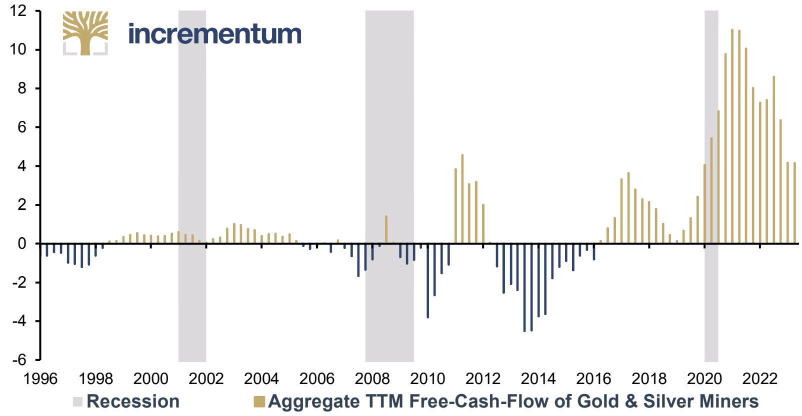
Either you understand your risk, or you don't play the game.
Arthur Ashe

We pointed out the value proposition of mining stocks last year. However, the profitability rediscovered in the course of the bear market catharsis of recent years and resulting high balance sheet quality are still largely negated. But at some point, generalists and value investors will (re)discover the value proposition of the mining sector. **What matters: The sector generates significant free cash flows (FCF).**

The commodity sector as a whole generated negative free cash flows in 2012–2016. Even after that, free cash flow was marginal and limited to low-cost companies; but **by spring 2021 at the latest, gold and silver miners became true cash flow monsters. In 2022, profitability suffered from high inflation, yet total FCF was around USD 24bn.**

[77] Many thanks to our friends Tavi Costa and Kevin Smith at Crescat Capital for making the data available. Crescat's publications, such as "Mining Industry Renaissance", are always worth reading and can be subscribed to at the following link: https://www.crescat.net/investment-research/investor-letters

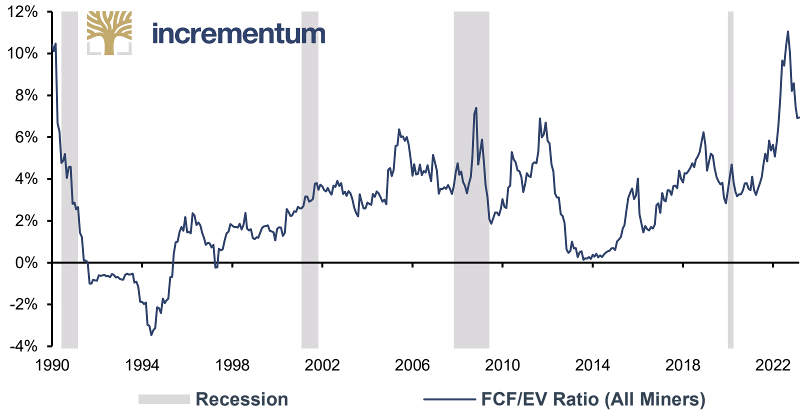
Aggregate TTM Free-Cash-Flow of Gold & Silver Miners*, in USD bn, Q1/1996-Q1/2023



Source: Crescat Capital LLC, Reuters Eikon, Incrementum AG
*Top 10 Miners by Market Cap in the Canadian & US Stock Exchanges

The following chart from our friends at Kailash Capital **shows the FCF/Enterprise Value-ratio of all US mining stocks.** The message seems clear: The market does not expect the current bull market in commodity prices and related cash flows to continue.

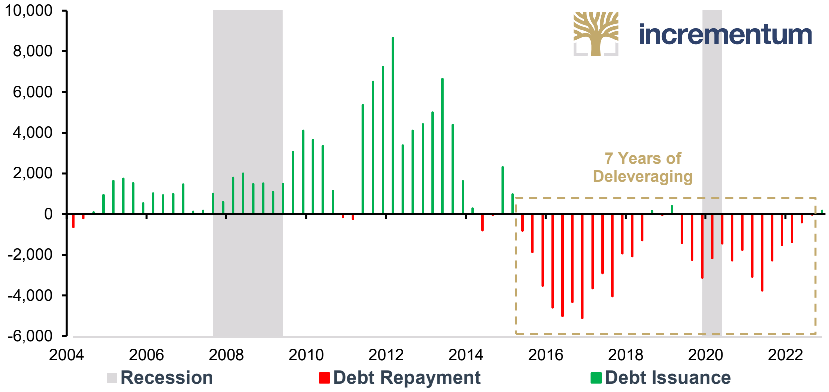
FCF/EV Ratio (All Miners), 01/1990-03/2023



Source: Kailash Capital LLC, Reuters Eikon, Incrementum AG

However, the sector has learned from past mistakes. The deleveraging process described in previous years can be seen in the chart below. **It shows that the majors have massively reduced their debt over the last seven years**.

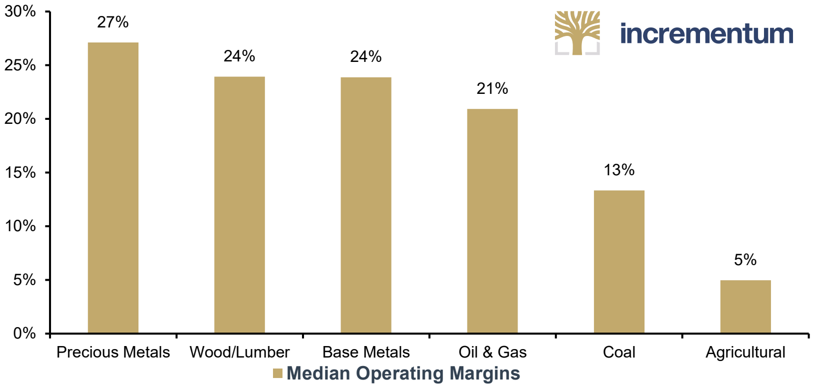
Aggregate Trailing 12 Month Net Debt Issuance for Top 10 US and Canadian Gold and Silver Miners by Market Cap, in USD mn, Q1/2004-Q4/2022



Source: Crescat Capital, Reuters Eikon, Incrementum AG

Within the commodities sector, no other industry is currently reporting higher margins than precious metals producers.

Median Operating Margins by Commodity*, 2023



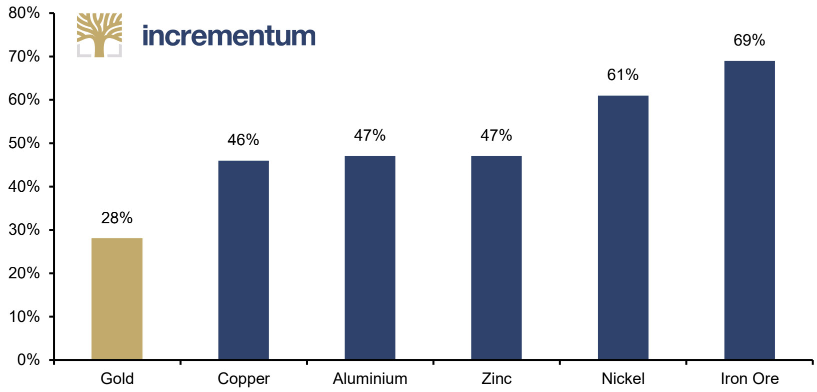
Source: Crescat Capital LLC, Tavi Costa, Bloomberg, Incrementum AG
*Companies with market cap above USD 1 bn. in the Canadian and US stock exchanges

M&A Wave Ante Portas?

Like energy investing, mining is the business of driving dollars into the dirt and hoping you get more dollars back.
Kailash Concepts

Despite the recent wave of consolidations (Kirkland Lake & Agnico Eagle, Newmont & Newcrest…), gold production is one of the most fragmented industries. The CRU Group chart below shows the global production share of the top 10 producers of each metal. Gold ranks last with only a 28% share from the top 10 producers. **In comparison, the top 10 iron ore miners produce nearly 70% of the world's supply.**

Percent Share of Global Output from Top 10 Producers by Metal



Source: CRU, US Global Investors, Incrementum AG

The history of M&A debacles in the sector still resonates in the collective conscience of investors; therefore, a high bar for reserves sets a higher level of capital discipline and lowers the risk of dilutive M&A transactions.
McKinsey

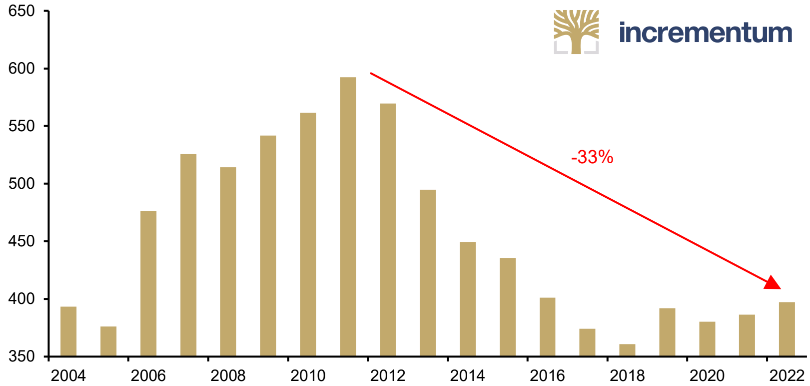
Due to ongoing supply deficits and the "*greener*" perception of copper, gold majors will increasingly diversify into copper. This was likely a backdrop to Newmont's acquisition of Newcrest, as copper currently accounts for about 25% of Newcrest's total net revenues, and the company hopes to increase this to 50% by 2030. Copper is currently the focus of the commodities industry due to its central role in the energy transition and because of rapidly dwindling global supplies. **In this respect, we expect that especially explorers and developers with significant gold-copper deposits in safe jurisdictions will be on the "menu" of the majors.**

This trend is already emerging. According to S&P Global, the total value of copper company M&A transactions in 2022 was more than USD 14bn, up 103% from the previous year, while the total value of transactions in the gold sector was USD 9.8bn, down 48% from 2021.

Of concern is the long lead times between start of exploration, discovery and mine development. To be sustainable the industry needs to support and grow its exploration business.
Richard Schodde

A major reason for the acceleration in M&A activity that we expect is the lack of exploration activity in recent years. The majors have started hardly any greenfield projects to invest in future growth, but instead have focused on the expansion of existing brownfield projects. Richard Schodde points out that, for example, 84% of all discoveries in Canada were made by junior explorers. Majors accounted for only 9% of discoveries. **As a result, the reserves of the top 10 miners have declined by 33% over the past 15 years.**

Gold Reserves by the Top 10 Miners, in moz, 2004-2022



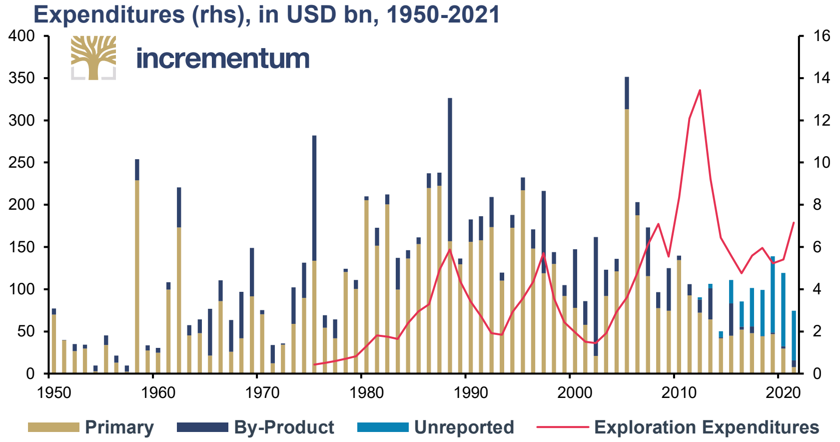
Source: Tavi Costa, Incrementum AG

Most analysts are either geologists or engineers. I should say, I go out of my way to learn as little geology as possible and as much about geologists as possible. So I would consider myself a geologist-ologist and I'm pretty good at that, how you read a geologist, are their feet buzzing or what have you.
Doug Pollitt

The majors have no alternative but to acquire new deposits from juniors and developers to replenish their resources. **Consequently, the larger and mid-sized companies will compete fiercely in the M&A market for the limited number of new large, high-grade deposits in stable jurisdictions.**

Although some great new gold discoveries have been made in recent years, the total number of ounces of global reserves added is almost negligible compared to previous decades. In addition, the development time for new projects has increased significantly. For some time, there has been no precious metals project that has been developed into a significant production facility.

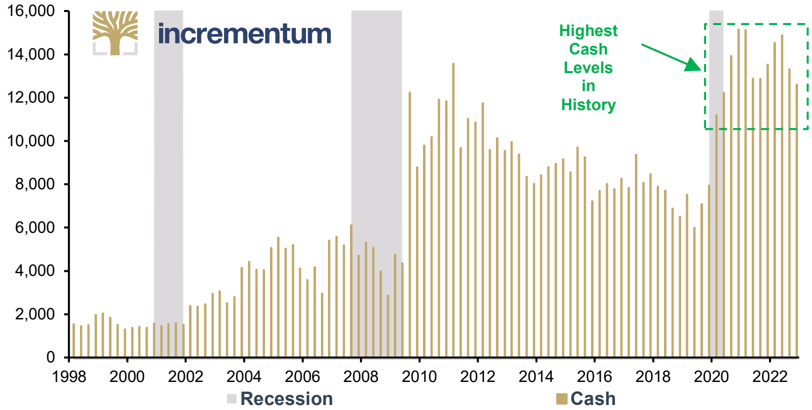
Discovered Gold by Source (lhs), in moz, and Exploration Expenditures (rhs), in USD bn, 1950-2021



Source: MinEx Consulting, Incrementum AG

The balance sheet strength of mining companies is an important factor that usually anticipates M&A cycles. The largest gold and silver companies currently have the highest cash balances in decades.

Aggregate Trailing 12 Month Cash for Top 50 US and Canadian Gold and Silver Miners by Market Cap, in USD mn, Q1/1998-Q4/2022



Source: Crescat Capital, Reuters Eikon, Incrementum AG

Funding Trends in the World of Junior Miners

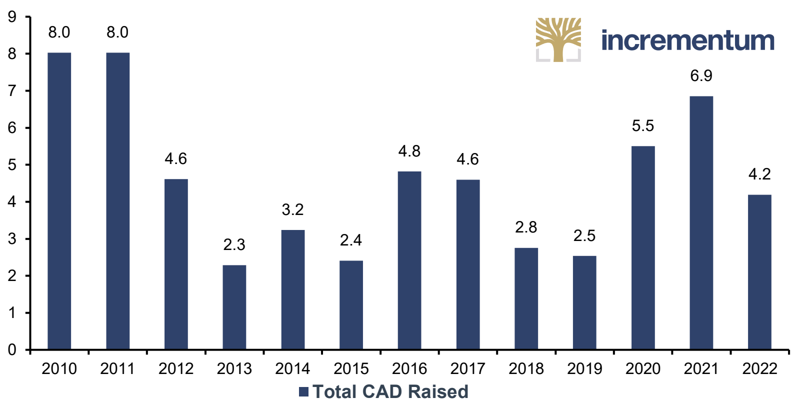
Prospecting for gold is like looking for true love: for every nugget there's a ton of rock and dirt.
Lord Richard Head

Let us now take a look at the funding activity in the junior mining sector over the past 12 months. In 2021, our friend Kai Hoffman provided us with an introduction to and interpretation of his proprietary *Oreninc Index*. The index measures the financial health of the Canadian junior mining sector on a weekly basis, tracking and logging up to 41 data points per financing.[78]

Go big or go home! Mixed emotions amongst the junior miners & explorers

Following a record year for financings, the financing situation for the junior mining and exploration companies softened in 2022. The total amount raised fell to CAD 4.2bn, following figures of CAD 6.9bn in 2021 and CAD 5.5bn in 2020.

Total CAD Raised, in bn, 2011-2022



Source: Oreninc.com, Incrementum AG

Despite a 39% drop in the total amount raised, sentiment suggested a far worse year in our sector. The question is, why was sentiment so far off from reality? The answer is surprisingly simple. Smaller companies and early-stage

[78] You can sign up for the weekly newsletter at Oreninc.

explorers struggled, while larger and late-stage explorers and developers were able to raise bigger cheques. It was clear in 2022 and up to today that raising larger sums of money is considerably easier than just raising smaller amounts. Simplified, it is and has been easier to raise CAD 20mn than CAD 2mn.

A speculator is a man who observes the future, and acts before it occurs.
Bernard Baruch

Other factors are also playing a role. Investors want to see proper value being created with their money. Serious money is not interested in grassroots exploration or financings that keep the lights on. They want to see their dollars push a company to the next level, even if it means higher dilution. In the cases of Fireweed Metals Corp. (TSX.v: FWZ) and Faraday Copper Corp. (TSX.v: FDY), dilution was 40% when they each raised CAD 35mn from large, new cornerstone investors. This money will make a huge difference, pushing each company to the next stage of development. The market has accepted the dilution and both companies are trading above the respective financing levels.

Top 100 financings

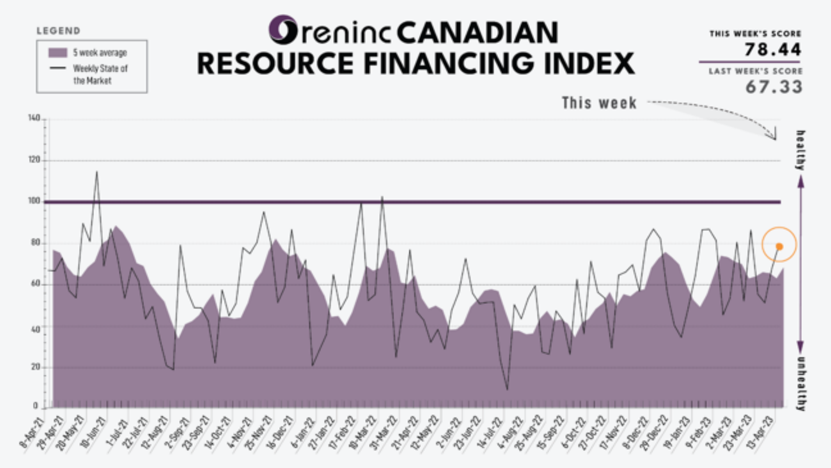
In 2022, the top 100 financings raised a total of CAD 2.3bn, a drop of 30% compared to the previous year. However, compared to the overall drop in financing activities, the top 100 did not fall as sharply, confirming the above statement in regard to larger financings being preferred by investors.

Price is what you pay. Value is what you get.
Warren Buffett

Out of the 10 largest financings in 2022, only 3 were gold companies. In 2021, the number was 8. In the past 12 months, the precious metals saw increasing competition from lithium, copper, and uranium companies. Also, 2 silver companies made it into the top 10 this past year. Overall, 55% of all financing activity can be ascribed to gold-related companies. Gold is still by far the most sought-after investment. Second-ranked silver and copper each attracted 10% of the investment dollars in 2022. Lithium ranked 4th with 8%.

The proprietary Oreninc Index has been developing serious strength over the first five months of 2023. Overlaying the index chart with the gold price shows a clear correlation between the two. Higher prices for the precious metals are also pushing banker and broker confidence higher. This is evidenced by 48 bought deals within our coverage universe so far. This tops the 2022 number (total: 21) by 128%. We do not see any reason at this point for a change in momentum.

Oreninc Canadian Resource Financing Index



Source: Oreninc

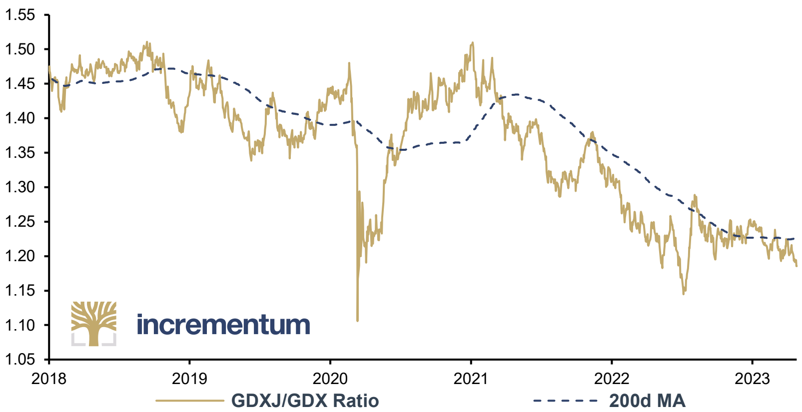
Conclusion and Outlook

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

The mining sector is currently in better shape than one would expect from the stock price developments. Interest rate hikes, geopolitical risks, resource nationalism, and obviously the general uneasiness of the stock market impact the risk tolerance of investors. It is therefore no wonder that the large-cap royalty and streaming companies such as Franco Nevada and Wheaton Precious are trading close to their all-time highs, while the top three major producers Newmont, Barrick and Agnico Eagle are still between 20 and 30% away from their highs.

If we analyze the relative strength within the mining sector, it seems that risk appetite has not yet returned. The junior miners (GDXJ) have shown relative weakness compared to the seniors (GDX) in recent months, although we are now starting to see some stabilization in the ratio.

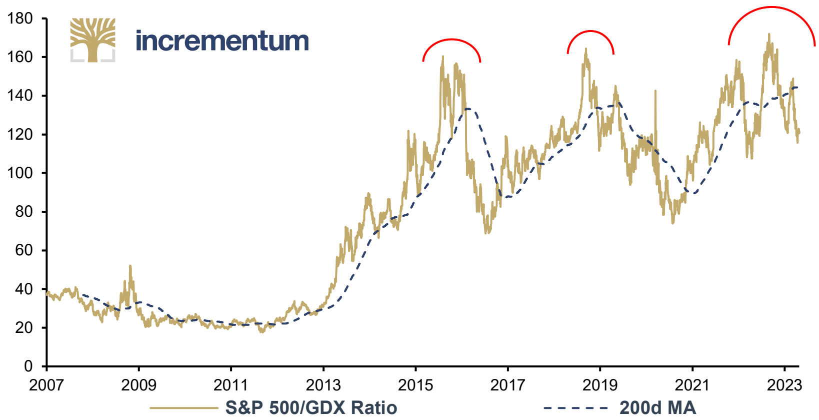
GDXJ/GDX Ratio, 01/2010-05/2023



Source: Crescat Capital LLC, Tavi Costa, Reuters Eikon, Incrementum AG

Relative to the overall market, however, we could imagine that the miners will now enter a phase of (relative) strength. This is also suggested by the following chart.

S&P 500/GDX Ratio, 01/2007-05/2023



Source: Crescat Capital, Tavi Costa, Reuters Eikon, Incrementum AG

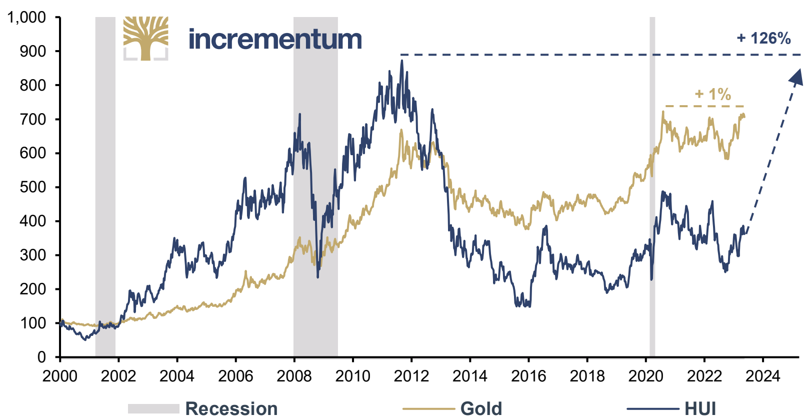
Conventional wisdom results in conventional returns.
Mario Gabelli

The market does not yet seem to have sufficiently realized that many miners have significantly strengthened their balance sheets, their margins, and their business models in recent years. We believe the new commitment to greater financial discipline and shareholder value is an essential – albeit very late – realization by the sector. Whether or not this new focus is mere lip service will be seen in the coming quarters. **We therefore think that gold stocks have a clearly asymmetric payoff profile**.

You make most of your money in a bear market; you just don't realize it at the time.
Shelby Cullom Davis

Although the gold price has been trading close to new all-time highs, the HUI is trading more than 50% below its all-time high of 635 in September 2011. The equity dilution of recent years, which in part dwarfs the central banks' brisk monetary inflation, is certainly partly responsible for this. Nevertheless, we believe the valuation discrepancy is exaggerated, especially given the sector's much-improved fundamental condition.

Gold and HUI, 100 = 01/2000, 01/2000-05/2023



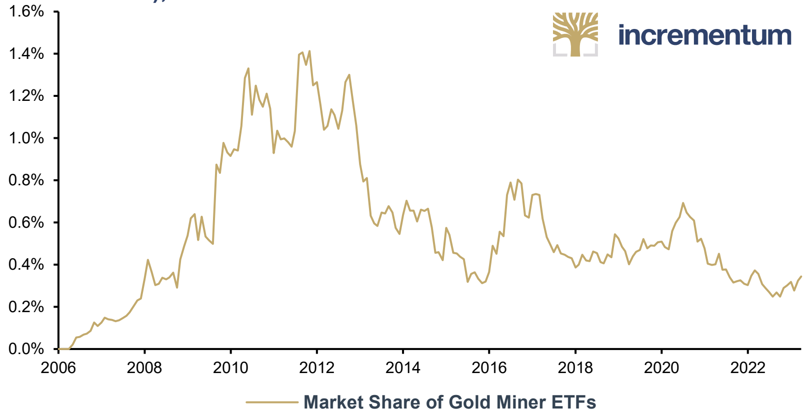
Source: Reuters Eikon, Incrementum AG

Turn around. Every now and then I get a little bit nervous that the best of all the years have gone by.
Bonnie Tyler

Currently, we believe there is no shortage of fundamental reasons to invest in the mining sector. These include, first and foremost, record free cash flows, share buyback programs, historically high dividend yields, stable balance sheets, reasonable management teams, and strongly deleveraged companies. In addition, we are likely to be at the beginning of an M&A cycle, from which first-class explorers and developers should particularly benefit.

A look at the market share of mining ETFs in the overall ETF market shows that the party has definitely not started yet. Currently, gold mining ETFs account for only 0.34% of all assets invested in ETFs. At the peak in 2011, the share was still just 1.4%.

Market Share Gold Miner ETFs (Gold Miner ETFs AUM/All Equity ETFs AUM), 01/2006-04/2023



Source: Topdown Charts, Incrementum AG

This time, the key will be to show that the industry has not lost its discipline.
Sean Boyd

We expect that producers' bubbling cash flows will lead them to replenish their shrinking reserves through acquisitions and mergers. The biggest beneficiaries of this development will be junior producers, fully funded developers, and explorers with world-class discoveries in Tier 1 regions. We also expect increasing M&A activity in the copper sector. **Therefore, we are currently focusing on these segments in particular in our research and investment allocations.**

After this brief analysis of the status quo of mining companies, we will turn our attention in the following two chapters to the current challenges facing the mining industry and the issue of ESG in the mining sector.

Life Cycle of a Mining Project

The gold mining business is - to my mind - the easiest business to make money in... At the bottom of the cycle the gold business is always under-capitalized.... And at the top, it's always over capitalized... So, if you can really just be a bit of a contrarian and be in there at the bottom and then when they're clamoring for gold just give it to them, you can't go wrong.

Pierre Lassonde

- **Although investing in exploration and development companies carries high risks, the potential rewards are correspondingly significant.**
- **The Lassonde curve aptly captures the life cycle of a mining project.**
- **At each of the seven main phases of the life cycle, various risks may arise, some of which could spell the end of the project, and possibly even the company itself.**
- **The riskiness of the exploration stages is well-documented. Only 10% of gold deposits have sufficient gold to warrant further development, while less than 0.1% of prospected sites ultimately reach production.**
- **Diversification is crucial when investing in exploration and development-stage mining companies.**

Introduction

Most of them (mining companies) won't make it...but what about the ones that do? If I'm in early and I stay the ground, I press the bet. It's like being at a table with a winning run, you keep doubling down.
Eric Sprott

There are numerous mining companies listed on stock markets, ranging from large, diversified mining behemoths to micro-cap exploration companies with limited funds and the dream of discovering a viable mineral deposit. This provides investors with a broad spectrum of investment opportunities in mining projects at varying stages of development, each with different levels of risk and corresponding levels of potential profits.

While it may be relatively easy to make a near-certain bet that Canada will win an ice hockey game against Japan, the resulting profit would likely be meager. Conversely, correctly predicting that Austria will beat Sweden would yield a much more significant profit. And if one were to somehow predict the victory of Liechtenstein over Finland, the resulting profits could amount to thousands of percent. **Similarly, correctly selecting an early-exploration-stage company that successfully advances to mine construction decision, or even to mine commissioning, can yield substantial profits.**

The Lassonde Curve

Bullion doesn't pay interest or dividends, nor does it grow or expand by itself. That's the price you pay for tranquility.
Pierre Lassonde

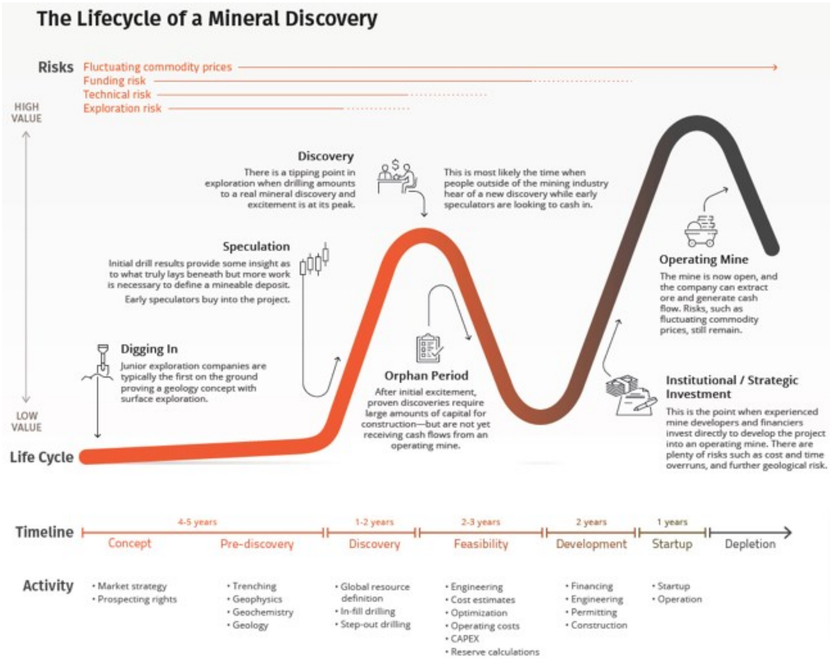
The renowned Lassonde curve is named after its author, Pierre Lassonde, a legendary figure in the mining industry, and it effectively portrays the life cycle of a mining project. Utilizing his extensive experience, Lassonde outlined, for the first time, the typical behavior of investors and, consequently, the market valuation of a mining project at various development stages, in a 1990 book titled *The Gold Book: The Complete Investment Guide to Precious Metals*.

The life cycle commences prior to the discovery of a deposit and concludes during a period of depletion. Lassonde has classified the life cycle into seven distinct phases.

Phase 1: The Concept

Risk means the chance of being wrong -- not always in an adverse direction, but always in a direction different from what we expected.
Peter Bernstein

The first phase, known as the concept phase, is when a mining company begins from scratch, and must devise a plan and obtain prospecting rights. Although there are numerous options available, it is not typical for a company to stake a random property, hoping to strike it rich. Instead, the common approach is to acquire prospecting rights from another company or an individual prospector, assuming there is some likelihood of discovering a viable mineral deposit. A prospective site can also be identified based on the expertise of internal or external geologists. Alternatively, a company may stake land near a known deposit, or acquire a formerly producing mine.



Source: Visual Capitalist

The sky is the limit to what technology can do for the mining sector.
Vince Gerrie

Decades ago, miners were only capable of extracting visible gold, which resulted in many deposits being abandoned as depleted. **However, it is possible that these abandoned deposits still contain significant volumes of gold, given the current technologies and gold prices that make it profitable to mine ore containing less than 1 g/t gold.**

You'll find me out there.
There's gold there somewhere.
Cormac O Caoimh

Another option is to search through archives for old exploration results. It is feasible that several decades ago a company or government agency was looking for a specific mineral, such as uranium, and discovered potential deposits of other metals. However, as their goal was to locate uranium, they did not pursue these deposits and left the exploration results forgotten in the archives.

Phase 2: Pre-Discovery

Following the concept phase, the pre-discovery phase begins, where fieldwork is initiated on the acquired property. The company starts by collecting water and soil samples to identify anomalous levels of specific metals. Geophysical surveys are conducted to detect magnetic anomalies beneath the surface that may indicate the presence of higher concentrations of metals. **According to the Lassonde curve, the concept and pre-discovery phases may take up to 4–5 years**. However, the duration of these phases is heavily dependent on the availability of funding. If the company has sufficient funds, which is typically not the case, the early works may be completed much quicker. Conversely, if the company lacks adequate funding, the entire process may take longer or even result in the company's bankruptcy without any progress being made.

Phase 3: The Discovery

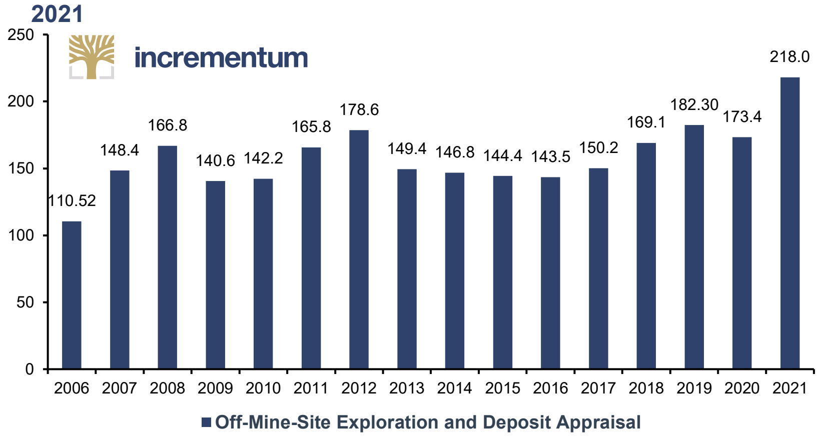
Following a successful pre-discovery phase, the discovery phase commences, marking a crucial juncture in the project's development. During this phase, the geological concept, which is based on chemical and geophysical surveys, is substantiated by positive drill results. **Drilling represents the sole means by which one can investigate subterranean deposits with a deep-level analysis.** Upon concluding the discovery phase, a maiden resource estimate is compiled, presenting the first definitive figures relating to the deposit's size and concentration of targeted metals. This estimate serves as a critical determinant of the project's future profitability.

The Discovery phase of World Class Discoveries is a short lived strong uptrend. The majority of the gains are made in less than one year.
Willem Middelkoop

Positive drill results typically trigger a surge of speculation in the stock market, causing the company's share price, and thus the perceived value of the project by the market, to rise rapidly. However, while this situation may yield substantial profits for existing investors, new investors may find themselves at risk of suffering significant losses. Exploration companies are often undercapitalized, and the opportunity to leverage the recently inflated share price to secure equity financing is highly tempting, particularly given the considerable costs associated with delineating even a relatively small deposit, which can run into tens of millions of US dollars. For larger deposits, costs can easily exceed USD 100mn. As a result, equity financing may quickly put an end to the momentum.

Drilling is a major expense during this phase of the project life cycle. The cost of drilling depends on several factors, such as the location's remoteness, the depth of the drill hole, and the type of rock being drilled. For instance, 2021 data from the Institut de la statistique du Québec revealed that the average cost per meter of off-minesite exploration and deposit appraisal drilling was USD 217.18, ranging, however, from USD 195.52 in the Abitibi-Temiscamingue region to USD 528.27 in the Cote-Nord region. Abitibi, located in the southwestern part of the province with excellent infrastructure, incurs lower costs. Conversely, Cote-Nord has harsh weather conditions, poor infrastructure, and less-accessible projects, resulting in higher expenses. **Furthermore, costs have steadily risen, almost doubling since 2006, as illustrated in the chart below.**

Off-Mine-Site Exploration and Deposit Appraisal, in USD mn, 2006-2021

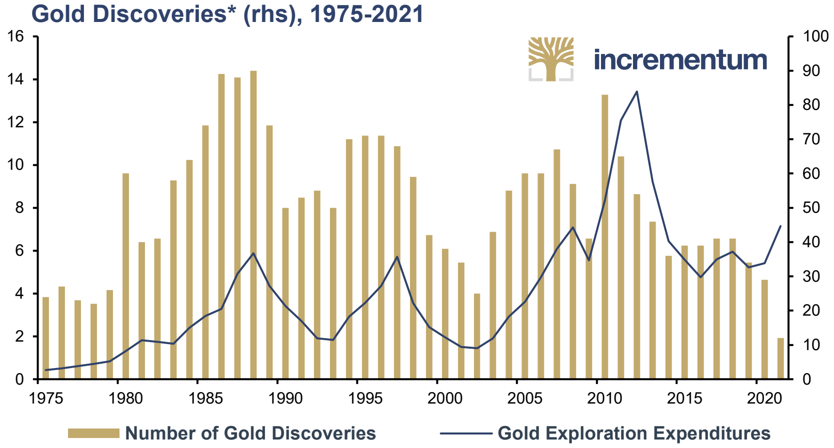


Source: Institut de la statistique du Quebec, Incrementum AG

The road to freedom must be uphill, even if it is arduous and frustrating.
Andrew Goodman

The challenge is that exploration costs are increasing while the number of new gold discoveries is decreasing. According to the chart below, the number of new gold discoveries reached its last peak around 2010, although the volume of exploration expenditures peaked two years later. Since then, both the number of new discoveries and the volume of exploration expenditures have declined rapidly. While the volume of expenditures in 2020 has increased somewhat recently, the number of new gold discoveries had fallen to new all-time lows.

Gold Exploration Expenditures* (lhs), in USD bn, and Number of Gold Discoveries* (rhs), 1975-2021

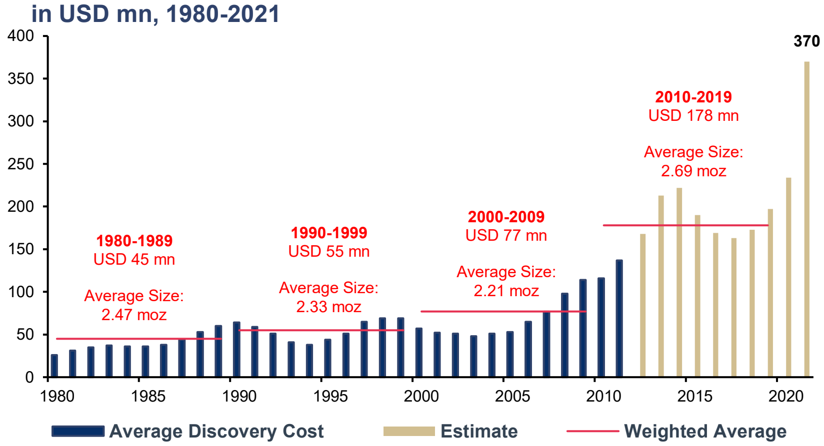


Source: MinEx Consulting, Incrementum AG
*Primary Gold Deposits >100koz

Brother, can you spare a dime?
Bing Crosby

The trend of increasing discovery costs is also depicted in the chart below. Between 2000 and 2009, the average cost was USD 77mn, while between 2010 and 2019 it rose to USD 178mn. **The issue is that most of the easily accessible deposits have already been discovered.** What remains are often deposits located in more remote areas, as well as deposits buried deep beneath the surface.

Average Discovery Cost and Estimate* (3 Year Rolling Average), in USD mn, 1980-2021



Source: MinEx Consulting, Incrementum AG
* Primary Gold Deposits >100koz

Phase 4: Feasibility

Victory has a thousand fathers, but defeat is an orphan.
John F. Kennedy

Even in the absence of significant equity financing that could potentially dilute shareholder value, as the mining project advances into the feasibility stage, the initial enthusiasm surrounding it tends to wane. **Speculators come to the realization that the period of rapid returns has reached its conclusion – at least temporarily – and the construction of the mine, assuming it comes to fruition, will likely take several years**. Consequently, they begin to cash in their profits and redirect their attention towards a new and promising discovery elsewhere. **This shift in investor sentiment results in a decline in the company's stock price, commonly referred to as the *orphan period*.**

One of the biggest risks to the technical and economic viability of any mining project is a poor understanding of the geology or resource estimation.
Neal Rigby & Ben Parsons

The feasibility stage of a mining project typically spans a duration of 2 to 3 years, during which various economic studies are conducted. These studies include the preliminary economic assessment (PEA), pre-feasibility study (PFS), and the feasibility study (FS). The PEA outlines the initial concept of the future mining operation, detailing the annual production volume and cost projections, as well as providing estimates for capital expenditures required to construct the mine and calculating the net present value (NPV) and internal rate of return (IRR). Sensitivity analysis is also performed to assess the impact of variables such as metal prices, energy prices, foreign exchange rates, and discount factors on the NPV and IRR. The NPV and IRR are key figures in determining the economic feasibility of the project, with a desirable outcome being an NPV that exceeds capital expenditures and an IRR of over 20%.

The PFS and FS studies provide further refinement of the mining operation, with more reliable estimates of the project economics. The feasibility study is the most reliable of the technical-economic studies. **The estimates provided by the feasibility study should be accurate to within plus or minus 15% of reality, making the study a critical tool for obtaining debt financing from banks or other financial institutions.**

Criteria	Technical & Economic Studies		
Study	Preliminary Economic Assessment (PEA)	Prefeasibility Study (PFS)	Feasibility Study (FS)
Concept	"What it could be"	"What it should be"	"What it will be"
Objective	Early Stage Conceptual Assessment of the Potential Economic Viability of Mineral Resources	Realistic Economic and Engineering Studies Sufficient to Demonstrate Economic Viability and Establish Mineral Reserves	Detailed Study of how the Mine Will Be Built, Used as the Basis for a Production Decision
Cost Accuracy	+/- 50%	+/- 25%	+/- 15%
Engineering	< 1%	1-5%	5-25%
Mineral Estimate Inputs	Inferred/Indicated/ Measured Resources	Indicated & Measured Resources	
Mineral Estimate Outputs	Inferred/Indicated/ Measured Resources	Probable & Proven Reserves	

Source: Mining.com, Incrementum AG

Phase 5: Development

After a successful feasibility stage, the development stage of the mining project commences. **This phase involves not only the actual construction of the mine but also the necessary permitting and financing procedures.** The acquisition of the numerous permits required to begin the construction process is a critical aspect of the development stage, with some permits obtained from local authorities and others from national authorities. The permitting process typically takes several years, unless the project is located in a developing country where the process may be expedited, especially if certain influential parties "express interest" in the project. **It is ideal to obtain all necessary permits around the time of completing the feasibility study.** Doing so can streamline the financing process, allowing mine construction to commence relatively soon after.

Size does matter. There's a lot of ways to make people feel good, but personally I think it does enhance things.
Pamela Anderson

The financing process for a mining project is a complex matter that requires careful consideration. Ideally, the project should be financed using internal financial sources or a combination of internal sources and debt. **However, this option is typically only available to established mining companies. Smaller miners or pure developers may have to rely on less-favourable financing options**. Debt financing typically covers only a portion of the construction capex, usually around 50-60%. The remaining funds can be obtained through various means, such as the sale of a stream, royalty[79] or off-take rights, selling a portion of the project to a joint-venture partner, or by raising equity financing.

Studies have demonstrated that investing in shares of miners at the point of a construction decision until the first output of metal has a very high success rate. That's because there's a sense of clarity and definitive timeline. Investors can see the company's finish line to becoming a new producer.
Peter Krauth

While equity financing is usually the least preferred option for shareholders, it is often included in the financing package. The level of share dilution resulting from the financing package varies from project to project and can have a significant impact on investors' future profits. For example, high interest rates on debt, unfavourable royalty or stream terms, unfavourable JV partnership terms, or excessive share dilution can greatly diminish the upside potential. **Therefore, while the announcement of a large financing package may be considered positive news, its impact on the share price is not always positive and sometimes barely moves it.**

Once all necessary permits and financing have been secured, mine construction may commence and typically takes around 1–2 years. However, in the case of exceptionally large or remote projects, or underground mines with ore bodies situated at significant depths, construction may take longer. **It's important to note that during this time, unforeseen issues may arise, as is possible during any phase of the mining project's life cycle.** Nevertheless, assuming construction proceeds without major problems, the share price should gradually increase as the mine's commissioning draws closer.

Phase 6: Startup

To succeed, planning alone is insufficient. One must improvise as well.
Isaac Asimov

The startup phase is important because it's when the mine is finished and production begins. However, even if everything goes according to plan, the process of ramping up production can take several months, or even more than a year in the case of complex underground projects. During this time, the share price may be affected by any negative news indicating potential complications or the possibility that original production targets won't be met.

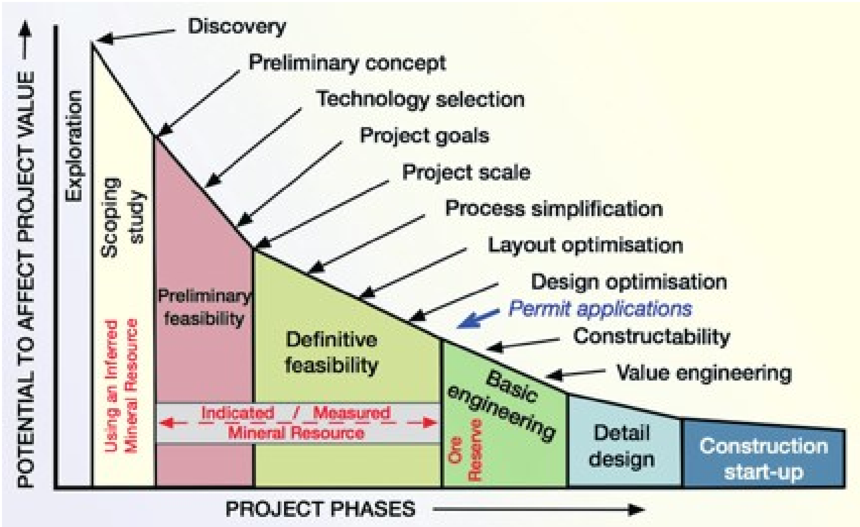
[79] For a deep dive on royalties and streamers, *see* "Royalty & Streaming Companies: An Excellent Way of Investing in Gold," *In Gold We Trust* report 2022

Phase 7: Depletion

In the depletion phase, the company extracts mineral resources from the mine and the mine's reserves start to decrease. However, the company can prolong this phase by exploring the surrounding areas and discovering new deposits or expanding the current ones.

Mining is like a search-and-destroy mission.
Stewart Udall

As depicted in the chart below, the potential gains in the earlier development stages are substantial. **However, they are accompanied by heightened risks**. The stages of exploration and early economic studies carry the biggest potential gains as well as risks. Conversely, the profit potential during the engineering and construction stages is generally lower**. The riskiness of the exploration stages is well-documented, and research by the World Gold Council shows that only 10% of gold deposits have sufficient gold to warrant further development, while less than 0.1% of prospected sites ultimately reach production.**



Source: Geochemical Perspectives

Lessons from History

Problems usually start with grade, then metallurgy, and then capital costs.
John McConnell

The entire Lassonde curve is fraught with risks. At each stage of the process, the project is vulnerable to failure. For a small exploration company, lacking any cash-generating assets could be a game-ending scenario. Even established companies may suffer a substantial decline in their stock prices. Geological risks are the primary concern, as drill results may indicate that an uneconomical deposit lies beneath the surface. This may be due to a variety of reasons, such as low metal concentrations or deposits situated too deep. Typically, the deeper the deposit, the higher the grades required to make the mining operation profitable. Grades of approximately 1 g/t or lower are adequate for an open-pit mine but are insufficient for a mine several hundred meters below the surface**. Another issue is metallurgy, which can be complex, rendering the whole extraction process too expensive and inefficient, despite the deposit's size and high grades.**

Matthew McConaughey as "Kenny Wells":
You went looking for bauxite, and you found copper. I went looking for gold and found a friend.
Edgar Ramirez as "Michael Acosta":
That is the single hokiest thing I've ever heard in my life.
Gold, 2016

The risk of fraud is particularly prevalent during the discovery phase. One of the most well-known examples of this is the Bre-X Minerals scandal. This story was even adapted into a 2016 movie titled *Gold*, featuring Matthew McConaughey In 1995, Bre-X announced a massive gold discovery in Busang, Indonesia, with estimated resources of over 70mn ounces. Some reports even suggested there could be as much as 200mn ounces. The company's penny stock share price soared, and it was listed on both the TSX and NASDAQ. Its market capitalization peaked at over USD 5bn in 1996, attracting the attention of major players in the gold mining industry. Freeport-McMoRan emerged as the winner and was set to acquire the company. However, when Bre-X's chief geologist mysteriously fell out of a helicopter and his body was not found, suspicion arose.

Before the acquisition was completed, Freeport decided to drill their own core samples, which showed no significant concentrations of gold. It was later discovered that Bre-X had tampered with the crushed core samples, leading to the company's collapse and bankruptcy by the end of 1997. **However, the scandal had a positive outcome**. In order to restore investor confidence, Canada adopted the National Instrument NI 43-101, which regulates the information policies for mineral properties and requires qualified persons to sign off on reports and take responsibility for any errors.

Nobody was interested in me before I bought the Nets.
Mikhail Prokhorov

A similar incident took place in late 2010, when Supatcha Resources announced a resource estimate for its project in Ukraine, stating a resource of over 20mn ounces of gold. Shortly thereafter, the company announced a takeover offer by Russian billionaire Mikhail Prokhorov, the former owner of the Brooklyn Nets.

Occasionally, a deposit is indeed discovered, with true and promising drill results, favorable metallurgical analysis, and optimistic economic projections. Subsequently, the company may opt to skip the pre-feasibility and feasibility studies, saving several years and millions in expenses, and proceed directly to mine construction. Such a decision ought to alert investors, as it can often lead to massive difficulties. **Colossus Mining and Rubicon Minerals feature in excellent examples of such cases.**

Colossus Mining, in an effort to restart the Serra Pelada mine in Brazil, encountered problems when they decided to jump directly to the construction phase instead of conducting pre-feasibility and feasibility studies. Despite promising drill results that showed huge concentrations of gold, platinum, and palladium, including notable intersections such as 1,495 g/t gold, 517 g/t platinum, and 556 g/t palladium over 7.6 meters, the company chose to forego the important studies and did not even prepare a resource estimate.

Mining is the art of exploiting mineral deposits at a profit. An unprofitable mine is fit only for the sepulcher of a dead mule.
T.A. Rickard

The promising drill results were enough to secure financing for reconstruction of the Serra Pelada mine in 2011. However, problems quickly arose, including a disappointing resource estimate, dewatering difficulties, and cost overruns. **Despite numerous delays, construction continued until 2014, when Colossus declared bankruptcy.** Shareholders suffered greatly, with their shares consolidated at a 200:1 ratio and new shares issued to creditors. **As a result, old shareholders retained a mere 1.7% stake in the company, effectively losing all of their investments.**

In 2008, Rubicon identified a valuable deposit in Red Lake, Ontario. With gold prices at historic highs and a positive preliminary economic assessment (PEA), the company decided to move directly to construction. **Regrettably, after commencing production at the new mine in 2015, it became apparent that the mineralization was more intricate than initially anticipated.** Consequently, mining operations were halted, and the company underwent a restructuring, resulting in devastating losses for the original shareholders.

Good projects that are really good, even if they're run by fools, will still make investors money. But smart people can make money from mediocre deposits.
Ross Beatty

Following the restructuring, a new management team was appointed, which launched a comprehensive exploration campaign, refined the geological model, prepared a rigorous preliminary feasibility study (PFS) and feasibility study (FS), and mined and processed a substantial 35,000-tonne bulk sample. In 2021, Battle North Gold, formerly Rubicon, was acquired by Evolution Mining, which incorporated the project into its Red Lake operations. **Had the prior management team not rushed the development process and neglected the crucial studies, the original shareholders would likely have achieved significantly better outcomes.**

Indeed, completing all necessary studies does not guarantee the start of mine construction, as obtaining permits and financing are also critical prerequisites. **The permitting process has often been described as complicated, requiring the company to navigate a welter of local and national authorities as well as various and sundry interest groups.** In countries such as Canada and the USA, the company may also need to address the concerns of First Nations, who may not always welcome another mining project on their land.

Time Risk Associated with Lengthy Projects

Once the permits are secured and financing is in place, mine construction can commence, introducing a new set of potential issues. **There is usually a delay of several quarters, and sometimes years, between completing the feasibility study and starting construction.** Additionally, construction typically takes more than a year, often exceeding 2 or 3 years in large projects. **While low inflation may not be a concern, high inflation can lead to significant cost overruns.**

The mining business is not an easy business because first you have to find it, being able to explore, then you have to build it. It's all very treacherous and then you finally get it going. You can come out, it collapses! If you look at it from 1,000 miles off it looks like a crazy business. It's not that easy to make money.
Lukas Lundin

In 2009, Barrick Gold began construction of the Pascua Lama mine located on the border between Chile and Argentina, with an estimated capex of USD 2.8–3bn. **This was already a high figure compared to the initial 2000 estimate of USD 1.2bn, but the cost continued to rise.** By 2011, it had increased to USD 4.7–5bn, followed by an estimate of USD 7.5–8bn in 2012. In 2013, Barrick Gold acknowledged that the final cost would likely exceed USD 10bn, but the exact figure remains unknown. **In late 2013, after spending billions on the project, Barrick was forced to suspend the construction activities of the Pascua Lama mine**. Not only due to the enormous cost overruns but also because of environmental concerns raised by local communities and the Chilean courts. The project was accused of causing damage to nearby glaciers and contaminating groundwater. The suspension, initially meant to be temporary, lasted for seven years, until a court ruling ordered Barrick to transfer the project from care and maintenance to closure. Currently, Barrick is considering the possibility of developing only the Lama part of the project, which is located in Argentina.

Conclusion

Never was anything great achieved without danger.
Niccolò Machiavelli

Taking a mining project from discovery to production can be a long and expensive process, with many risks along the way. While successful investments in mining can yield significant rewards, the likelihood of success is relatively low, with many companies going out of business before a mine is even built. Project-killing problems can arise at any time, making diversification essential when investing in mining companies.


SENTIER
AGNICO EAGLE
Building stronger communities.
Agnico Eagle is committed to working with and contributing to the communities in which we operate to make a positive difference. We are guided by our culture of family, caring and community well-being.
AGNICO EAGLE
We make mining work.
AEM (NYSE and TSX)
agnicoeagle.com

Responsible Gold Mining: Meeting the Growing Demand for Sustainability

Your net worth to the world is usually determined by what remains after your bad habits are subtracted from your good ones.

Benjamin Franklin

- As a result of the push towards net zero, the *environmental* component of ESG has stolen the limelight in recent years. To redress the balance, we focus our analysis primarily on the social aspect of ESG in this year's *In Gold We Trust* report.
- There are numerous reasons to be optimistic about the future of responsible gold mining, as companies' efforts towards community engagement remain resolute.
- The financial implication of focusing on the *triple bottom line* is evident. Companies with high levels of social investment had a return on equity that was 20% higher than their peers.
- The progress towards sustainability is being hastened by new responsible gold certifications, which are raising standards and providing consumers with a greater quality of ESG investment products.
- Despite this, there are challenges on the horizon in the form of growing resource nationalism in Latin America, as well as the adverse consequences of automation.
- The extent to which these challenges can be reframed as opportunities to bolster community engagement will be the key determinant of ESG success for gold mining companies.

Introduction

Climate change is like gravity. You can deny it, but it doesn't go away.
Neil deGrasse Tyson

The current geopolitical situation, with the military conflict in Ukraine as its apex, a banking-sector crisis, inflationary pressures, and persistent high interest rates, has created an environment that is conducive to increased investment in gold. As a result of growing demand, gold mining companies have a prime opportunity to flourish. **However, in order to attract more investment to the sector, mining companies must capitalize on the rising value of gold and demonstrate a strong commitment to sustainability**, including a clear path to achieving net zero emissions, when presenting their case to institutional investors.

Over the last 4 years, we have provided ample coverage of the relationship between ESG and gold mining companies. As part of the *In Gold We Trust* report 2019, we detailed how the term *fiduciary obligation* had taken on a new meaning in light of ESG factors. For the *In Gold We Trust* report 2020, we focused more specifically on the *environmental* component of ESG, in response to the institutional drive towards decarbonization. Following this, the *In Gold We Trust* report 2021 featured guidance for tailoring an ESG-focused gold portfolio, again taking into account environmental considerations, in light of the Paris Agreement developments. Finally, the *In Gold We Trust* report 2022 continued the focus on environmental factors with coverage of COP26, the resulting paradigm shift to a low-emissions economy, and its meaning for gold-producing companies.

Gold mining can be a positive force for change, but only if we operate in a way that is socially and environmentally responsible.
Tony Makuch

Thus, in this year's *In Gold We Trust* report, we feel a redressing of the balance is necessary to disperse the limelight more equally across all 3 facets of ESG, starting with the "S", the social side of gold mining. This comes as there seems to be a perception amongst some media outlets that mining is somehow socially destructive. Of course, there are a few sad cases of this, including the recent travesties with child labor in a Democratic Republic of Congo-based cobalt mine. However, for the majority of gold mining companies, healthy relationships with local communities are commonplace. **Therefore, this idea that mining is predominantly an exploitative process could not be further from the truth.**

Photo Credit: World Gold Council

1000 dollars? And some in gold? That's a tidy sum.
The Good, the Bad, and the Ugly

As a means of proving this truth, this chapter will primarily utilise the *social* lens of ESG to review "The Good, the Bad and the Ugly" for gold mining sustainability practices, whilst aiming to be less ambiguous than Clint Eastwood's "man with no name" character in the famous spaghetti western film. **This section will showcase the exemplary community engagement work being carried out by gold mining companies today – particularly by our premium partners** – before outlining the risks to this in automation, cultural degradation and resource nationalism. Finally, the chapter will conclude by reviewing a selection of gold investment products that fulfill certain ESG criteria.

The Good

When your business prioritizes the wellbeing of all of its stakeholders, then all of those stakeholders gain respect for the business and your business can utilize that respect as a sort of currency and a means to accomplish business objectives.
Hendrith Vanlon Smith Jr.

Companies that uphold ESG principles and prioritize community engagement have the potential to mitigate conflicts, cultivate strong relationships with local stakeholders, and ultimately enhance shareholder value. This draws from John Elkington's theory of the *triple bottom line* of "people, planet and profit", which posits that companies' commitments to social and environmental concerns should be proportionate to their commitments to profits.

To achieve success in community engagement, companies proactively engage with local stakeholders, invest in community development initiatives, and establish transparent and meaningful consultation procedures. **Importantly, these policies and consultations must lead to actual measurable changes and investments in the community.**

In recent years, gold mining companies have made significant progress towards these outcomes. For example, AngloGold Ashanti has successfully provided healthcare services to over 360,000 community members and trained over 3,000 local entrepreneurs in business management through their community development initiatives. Additionally, their grievance mechanism has effectively resolved over 900 community grievances since 2016.

Similarly, Kinross Gold's community engagement programs have facilitated over 250 community development projects and provided over 100,000 community members with healthcare services, achieving a 93% satisfaction rate through their Stakeholder Engagement Program.

If we reverse engineer today's sustainability agenda, it is clear that a powerful element of its genetic code has been the Triple Bottom Line.
John Elkington

The financial implication of focusing on the *triple bottom line* is evident in a study by the International Council on Mining and Metals. It found that companies with high levels of social investment had a return on equity that was 20% higher than their peers. Moreover, a study by the WGC revealed that companies with the highest community scores achieved a total shareholder return of 63%, compared to just 14% for those with the lowest scores.

What Are Our Premium Partners Doing on ESG?

As a means of shining the spotlight on further positive examples of miner-stakeholder engagement, we now turn our attention to the way ESG principles are being implemented by some of our Premium Partners in gold and silver mining. Below, we provide a brief summary of each partner's ESG activities.

Victoria Gold

While operating in a top North American mining jurisdiction with a long mine life and strong ESG metrics, we have a great story to tell and we are just getting started.
John McConnell
Victoria Gold

In the land of the midnight sun – Yukon, Canada – Victoria Gold Corp is making substantial efforts to integrate with its community. **In 2022, a USD 1mn payment, derived from Victoria's Eagle Gold mine revenue, and a further USD 270,000 was remitted to the First Nation of Na-Cho Nyak Dun (FNNND) under a mutually created Comprehensive Cooperation and Benefits Agreement (CBA).** This agreement establishes the communication process between Victoria Gold and the First Nation and facilitates ongoing transparent and respectful communications, while providing stability throughout the life of the Eagle Gold Mine and Victoria's exploration activities.

Additionally in 2022, in connection with its Eagle Gold Mine, Victoria paid contractors and service providers USD 197mn, of which 62% (USD 123mn) was sourced locally in the Yukon, despite its being a small jurisdiction with a population of only about 44,000 people. You can find out more about Victoria Gold's commitments to responsible mining in their annual sustainability report.

Hecla Mining

In 2022, Hecla expanded on the company's commitment to responsible mining. This means meeting the highest environmental and sustainability standards, minimizing the impact of our operations on the environment, and respecting and supporting the communities where we live and work.
Philips S. Baker
Hecla Mining

In 2022, Hecla Mining demonstrated its dedication to the social element of ESG with a direct economic impact of more than USD 891mn in its communities, which included USD 278mn in connection with its Casa Berardi gold mine based in Quebec, Canada.

The USD 891mn in total direct economic impact comprised more than USD 65mn in payments of taxes, royalties, and license fees; more than USD 1mn in other royalties; and USD 738,000 in scholarships and donations, suggesting that education is a priority for Hecla Mining. According to the company, the funds go to local governments and community organizations to support schools, hospitals, roads, and other essential infrastructure, along with vital economic development like job creation and skills training. You can learn more about Hecla Mining's ESG activities in its recent sustainability report.

Asante Gold

Despite having commenced operations only since the latter half of 2022, we are proud of the demonstrable ESG achievements and milestones achieved to date. We continue to look for opportunities to increase our impact in this critical area of development.
Dave Anthony
Asante Gold

In Ghana, Asante Gold has strengthened community ties by making significant social investments, specifically in the area of education. The company has awarded 71 fully funded scholarships to students from within its catchment area, whilst also donating a computer laboratory to the Bibiani Nursing Training College, an institution with approximately five hundred female students. These investments into local infrastructure come in addition to its ownership and operation of the Mensin Gold Bibiani Limited Basic School, which has approximately four hundred students.

According to a 2021 study by McKinsey, women represent an estimated 8 to 17% of the global mining workforce, which is a challenge that Asante is also working to address. This is evident in its Promulgation of Women in Mining Policy, its Establishment of Women in Mining Chapters, as well as its appointment of women to key management positions such as General Counsel, Process Manager and Group HR Advisor. You can find more about Asante's ESG activity on its website.

Caledonia Mining

Our licence to operate and the long-term success of our business relies on mutually supportive, open and constructive relations with our local communities.
Mark Learmonth
Caledonia Mining

Caledonia Mining's ESG activity follows suit, with its community-part ownership model actioned in their Zimbabwe-domiciled Blanket gold mine. According to CEO Mark Learmonth, "*Caledonia takes a targeted and strategic approach to social investment by identifying the critical needs of the communities around Blanket*". As part of this, the local community owns a 10% share of Blanket, is represented on the board of directors, and has received USD 5.1mn in donations and advance dividends since 2012.

Caledonia Mining also expanded its CSR strategy in 2022 to encompass an additional Conservation pillar, which adds to its existing pillars of Education, Health, Agriculture, Women and Youth Empowerment, and Charity. These topics are centered around the United Nations Sustainable Development Goals, and you can learn more about their ESG activity on their website.

Endeavour Mining

Becoming the largest gold producer in West Africa has allowed us to leverage our scale to build an ambitious and impactful ESG strategy, centered on our purpose: to produce gold that provides lasting value to society.
Sébastien de Montessus
Endeavour Mining

Staying in Africa, there are further parallels between Caledonia Mining's approach and that of Endeavour Mining – a company embedding itself within the West African community in which its operations are based. According to CEO Sébastien de Montessus, 95% of employees are from host countries and 57% of senior management at the operational level is West African.

In 2022, Endeavour Mining's total economic contribution was USD 2.2bn, which included USD 563mn in taxes, royalties, dividends and other contributions to governments, as well as USD 1.1bn through the procurement of goods and services from national and local suppliers. This equated to approximately 80% of the group's total procurement being spent in West Africa, dispelling the myth that mining companies refrain from domestic spending. You can learn more about their ESG endeavors on their website.

Endeavour Silver

Our deep, long-standing commitment to ESG drives our business forward. Sustainability is an imperative for Endeavour Silver – essential to our success and growth. In fact, sustainability has been a core guiding principle and value of Endeavour since inception and prior to ESG becoming a significant consideration for stakeholders and governments.
Dan Dickson
Endeavour Silver

Not to be confused with Endeavour Mining, Endeavour Silver is a company that is successfully continuing the pattern of miner-community engagement. **In its Sustainability Strategy 2022-2024, the "People" pillar covers the "S" part of ESG**, with the ambition here being to *"[i]ncrease positive social impacts for people in our workforce and in the communities where we operate*".

In order to execute on this objective, Endeavour Silver have revamped their onboarding process to better position new hires for success and to reduce turnover, whilst also having improved lodging and recreational facilities to make living conditions more comfortable for workers who live on-site. In addition to this, Endeavour Silver have updated its Safety Management System to align with ISO 450001 - the global standard that strives to reduce occupational injuries and diseases – and have increased funding to support more community programs and events, including public health services and educational initiatives. You can learn more about the ESG policy of Endeavour Silver in their most recent ESG report here.

Agnico Eagle Mines

As we continue to grow and evolve, being a trusted and valued member of the communities associated with our operations remains a fundamental principle and priority for Agnico Eagle. We strive to build and maintain strong partnerships with all stakeholders, including Indigenous communities, and continue to support their development priorities.
Ammar Al-Joundi
Agnico Eagle Mines

In a different manner of community involvement, Agnico Eagle Mines demonstrates the ability of mining companies to take social responsibility in times of adversity. In 2022, employees from Agnico's Eagle's Fosterville mine were involved in helping communities in Central Victoria recover from devastating floods that hit the region late in the year. As part of this, Agnico pledged AUD 750,000 to help the community recover from this event, in addition to USD 5.6mn in health-related community investments across the organization.

Moreover, Agnico has also contributed to improving access to higher education for hundreds of people in the Municipality of Ocampo, in Mexico. Since 2005, Agnico's team have been working with local teachers, parent committees, schools and government officials to support the development, construction and operation of local post-secondary education centres and services. You can learn more about Agnico's ESG commitments here.

Minera Alamos

We recognize that the successful construction of new mines can bring tremendous direct and indirect economic benefits to the local population.
Doug Ramshaw
Minera Alamos

In Mexico, amidst a backdrop of resource nationalism, Minera Alamos is proving to be resilient when it comes to community engagement. According to President Doug Ramshaw: "*Where we operate, we strive to not only support the communities in the vicinity of our operations but, in essence, seek to become part of that community*". This approach is apparent within the management teams of Minera Alamos' workforce, which comprise a majority of Mexican nationals.

As part of this commitment to providing employment to the local community, qualified residents from both the ejido and the municipality areas will have preference for employment once the mine is operational. You can read more about their ESG activities, as well as the progress of their Cerro De Oro, Santana. and La Fortuna mines on their website.

Aurion Resources

Aurion has explored in northern Finland since 2015, and we aim carry out our exploration activities safely, in an environmentally sustainable manner, and taking local conditions and stakeholders into account.
Matti Talikka
Aurion Resources

Despite being one of the smaller mining companies operating in Northern Europe, Finland-based Aurion Resources remains committed to the highest caliber of ESG practice. According to CFO Mark Serdan, "*Aurion strives to operate at or above global standards, understanding that we are guests in the communities we operate, we must be good stewards of the environment where we operate, and must be excellent ambassadors for the industry we operate in.*"

The practical application of this includes regular discussions and good co-operation with local stakeholders, working with third-party contractors and service providers that are local, and employing a majority of team members from the community. For more information on Aurion Resources, you can visit their website.

The Bottom Line

Clearly, gold mining companies are stepping up to the plate when it comes to serving the needs of the communities in which they operate. The range of ESG activity is diverse and the quality of stakeholder relationships appear to be high.

However, the tempestuous gale of automation seeks to blow the gold mining industry off course, as it reduces companies' ability to integrate communities through employment, with artificial intelligence taking the jobs instead. If history is anything to go by, this technological shift will require effective strategic planning to navigate.

The Bad

The past can hurt. But the way I see it, you can either run from it, or learn from it.
Walt Disney

In order to comprehend the future of community relations for gold mining corporations, it is necessary to first examine the past. The Industrial Revolution, which commenced in Britain during the late 18th century, revolutionized the methods of production and labor. The transition from an agrarian economy to an industrialized one resulted in a significant exodus of individuals from rural locales to urban hubs, where they could secure employment in factories and mills.

Pre-industrial mining

In the initial phase of the Industrial Revolution, a significant proportion of employment opportunities were still connected to the agricultural sector. However, with technological advancements and the introduction of novel machinery, a growing number of laborers were able to abandon farming in favor of factory work. By the mid-19th century, the agricultural workforce had dwindled to less than 10% of the British population, compared to a staggering 90% only a century earlier.

I wander thro' each charter'd street,
Near where the charter'd Thames does flow.
And mark in every face I meet
Marks of weakness, marks of woe.
William Blake

The transition from agriculture to industry was not without its obstacles. The new factories were typically situated in urban centers, necessitating workers to uproot from their rural abodes and relocate to the cities. This caused issues such as overcrowding, pollution, and various social problems – themes that were reflected at the time in the sorrow-laden poetry of English romantic poet William Blake. Additionally, the new industrial jobs were often perilous, with employees being subjected to risky conditions and extended work hours.

Mining during the industrial revolution

There is nothing permanent except change.
Heraclitus

Notwithstanding these challenges, the Industrial Revolution instigated unparalleled economic expansion and technological advancement. It ushered in new industries and commodities, laying the foundation for the world we live in today.

The already present automated future

Fast-forwarding to the present day, we stand at the brink of yet another technological revolution that has the potential to revolutionize our work and lifestyle. The automation revolution, already underway in various sectors, including the gold mining industry, is expected to accelerate in the forthcoming years, with significant implications for both the workforce, the workplace, and neighboring communities. **According to a recent report by McKinsey, automation adoption in the mining industry is predicted to surge by 50% over the next ten years.**

The effects of automation on the gold mining industry will be profound. It is estimated that nearly 80% of mining jobs can be automated, depending on the mine type and particular duties involved. As mentioned in the *In Gold We Trust* report 2019, mining operations, exploration, and site-remediation data will all become digital, automated, and processed by AI.

The Ugly

In a world where AI and automation are becoming a commonplace, deep expertise will help you stay ahead of the robots.
John Dixon

Clearly, automation is already gearing up, and for gold mining communities this could have catastrophic consequences. Many of these communities depend heavily on mining for employment and economic growth. Therefore, as jobs become automated, local workers will have fewer opportunities to find employment in the industry, leading to a potential loss of skilled labor from the area.

The consequential effects of this shift reverberate across to infrastructure and local services in the community. Gold mining communities typically have a wide range of supporting businesses and services, including transportation and logistics, food, and accommodation. As jobs in the mines evaporate, these auxiliary businesses will also experience the negative effects, leading to a more extensive economic downturn in the region. This may be particularly significant in regions where mining is the primary industry and where there are limited alternative employment opportunities available.

Robots will be able to do everything better than us… I am not sure exactly what to do about this. This is really the scariest problem to me.
Elon Musk

Furthermore, the implementation of automation could potentially worsen existing social and economic disparities. Workers who possess higher levels of education and skills may have better chances of finding alternative employment or retraining opportunities, leaving those with lower levels of education or skills at a disadvantage. **As a result, social and economic inequality within the community could increase, with the most vulnerable individuals being affected the most.**

A further adverse outcome of automation would be the erosion of cultural heritage. For many remote communities, mining is not only a source of employment but also a way of life that has been passed down from generation to generation**. The loss of jobs would profoundly affect this, disrupting the social fabric of these communities and leading to a sense of isolation and fragmentation.**

The Solution

From our point of view, mining companies should establish a stronger alliance with local communities by building on existing relationships. A way to achieve this is through sharing ownership with the community, making them partners, as with the aforementioned Asante Gold's providing a 10% share to the community of its Blanket gold mine.

Furthermore, community engagement has become increasingly important before, during, and after gold mining operations. Without it, companies risk not obtaining permits or facing strikes or riots; whilst with effective community engagement, benefits can be garnered such as acquiring social consensus to operate, building local support, and improving environmental and social performance.

Government should be a referee, not an active player.
Milton Friedman

We are of the view that government should have more of a "light touch" approach to economic matters; therefore we support the idea of voluntary cooperation among individuals. The concept of community part-ownership embodies this ideal, allowing for a productive partnership between mining companies and local communities. By sharing in profits and decision-making, the community becomes invested in the success of the project, encouraging cooperation and mutual benefit.

Not only this, **but community part-ownership of gold mining projects presents a compelling means to advance socioeconomic and economic well-being, while also providing advantages to the mining company and avoiding nationalization.** In *The Road to Serfdom*, Friedrich August von Hayek once asserted, "*The system of private property is the most important* *guarantee of freedom, not only for those who own property, but scarcely less for those who do not*".

At the end of the day, the world economy runs on commodities.
Mike Henry, CEO BHP

As the global economy continues to evolve, this approach may become even more vital in ensuring that resources are optimally employed to benefit all stakeholders**. Considering the upward trend in commodity prices, it is conceivable that governments may become increasingly eager to assert control over such resources in the coming decade, just as in the past.**

Nationalization campaigns

Ultimately, to alleviate the adverse impact of automation on gold mining communities, several potential solutions could be implemented. One approach is to concentrate on establishing new industries and sectors that can generate employment and economic growth in the region. However, to achieve this successfully, communities must be able to control their destiny and not rely on a central decision-making entity. **Economic freedom is crucial in this regard, as without it liberty cannot be attained.**

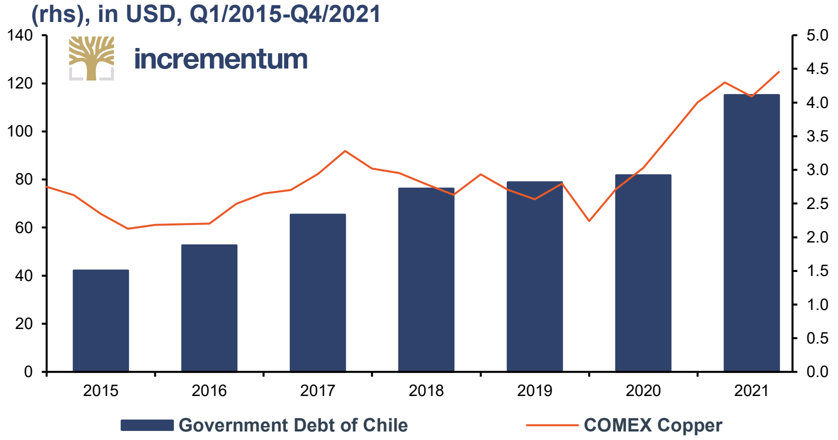
The Need for Community-Part Ownership in the Face of Growing Resource Nationalism

We are an old industry and there is no doubt we have changed and modernised, and we deserve credit for that. But we have not changed to the same extent that we have seen other industries reinvent themselves.
Jean-Sebastian Jacques
CEO Rio Tinto

The conventional model of mining, whereby companies own and operate projects while communities are relegated to passive bystanders, has come under fire due to its detrimental environmental and social impact, as well as its potential to engender conflict between mining firms and local communities.

Consequently, calls for nationalization of mines and the imposition of substantial royalties have grown louder, as a means of ensuring that mining profits are shared equitably, albeit primarily with the central government, rather than with local communities.

Government Debt of Chile (lhs), in USD bn, and COMEX Copper (rhs), in USD, Q1/2015-Q4/2021



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

It's a brave bet to ask an investor to prefer an uncertain marriage with a state company and a minority stake, risking capital and technology, as opposed to simply flying alone.
Armando Ortega, Baramin

In Chile, copper is a key battleground, due to the country's being the world's top producer, although lithium is a more recent subject of the government's resource nationalism attempts. Here, the proposal of Chilean President, Gabriel Boric is to ensure a government majority stake in all future lithium projects, which by his plan would see mining companies partner with a not-yet-created state-owned producer as minority stakeholders. This follows in the footsteps of a fellow leftist in Mexico, President Andres Manuel Lopez Obrador, who enforced a comprehensive lithium nationalization in 2022, and later sanctioned a new state-run lithium company, LitioMx.

Importantly, the drive towards resource nationalism is not confined to Chile and Mexico. The trend spans across a broad swath of Latin America, into Peru and Bolivia, to the point where it is "*now almost commonplace*", according to Peru's former energy and mining minister, Ivan Merino. **Argentina, which has kept its doors open to private investment, is the exception. This trend is highly problematic, in our view.**

Governments' preference for control over valuable commodities, combined with their associated thirst for anticipated financial returns, is an obstruction to private-sector capital and expertise. As a byproduct of this, regional frictions that are not conducive to an effective mining process will start to emerge, should this trend of resource nationalism persist.

You can't fight the friction, so Ease it off.
Imagine Dragons

One of these frictions would be an ineffective handling of social issues that arise from mining. Firstly, governments lack private-sector knowledge synergies when it comes to navigating the social problems that arise from mining. Secondly, governments' ability to finance solutions to social issues depends on the stability of government balance sheets, which are not incidentally embarking on unsustainable debt trajectories.

Despite this pessimistic outlook, it must be noted that a plethora of mining companies currently trade with undervalued Latin American assets. Clearly, the attractiveness of these opportunities will be boosted when the political pendulum in South America inevitably swings back from left to right. **This phenomenon will facilitate the displacement of resource nationalism and pave the way for community part-ownership to better resolve issues such as automation.**

When we attempt to exercise power or control over someone else, we cannot avoid giving that person the very same power or control over us.
Alan Watts

Ultimately, the latter solution is superior to resource nationalism, as it involves mining companies harnessing their capital and expertise to integrate with the communities in which mines are established. **Where resource nationalism seeks to control, community part ownership seeks to proactively remediate, allowing for the social issues plaguing the mining sector to be more holistically addressed.** As mentioned, gold mining companies are leading the charge on the social front through their adherence to ESG. **Consequently, this is driving increased demand for responsibly produced gold.**

Growing Demand for Responsible Gold Investment

Amid a climate of economic uncertainty, central banks are increasingly turning to gold reserves as a safeguard against inflation and a store of value. As demand and prices for gold continue to rise, mining companies face mounting pressure to meet production targets, often at the expense of the environment and local communities.

Consequently, this has provoked an increasing demand for responsible gold as consumers become more aware of the impact of their purchases on the environment and society. The gold mining industry has responded to this demand with various initiatives, including the World Gold Council's Responsible Gold Mining Principles and the LME Responsible Sourcing.

One notable development is the Responsible Jewellery Council's (RJC) Chain of Custody Certification. **This is a system that allows gold mining companies to demonstrate that their gold has been responsibly sourced, processed, and traded.** To achieve certification, the company undergoes an independent audit of its practices to ensure that they meet the RJC's standards for responsible gold mining. The certification process also includes an audit of the company's supply chain to ensure that the gold is tracked from the mine to the final product, providing assurance that the gold has been responsibly sourced.

The desire for gold is the most universal and deeply rooted commercial instinct of the human race.
Gerald M. Loeb

Similarly, the LME's initiative requires brands listed on the exchange to undergo a third-party audit to demonstrate compliance with responsible sourcing standards. This helps companies access new markets and customers that prioritize responsible sourcing and build trust with consumers through a transparent and standardized framework.

The RJC's Chain of Custody Certification and the LME's Responsible Sourcing initiative are notable developments in the gold mining industry's efforts to meet the growing demand for responsible gold. The benefits of these initiatives include providing a standardized framework for companies to demonstrate their responsible gold mining practices, building trust with consumers, and complying with regulations related to responsible sourcing of minerals. **These efforts help companies differentiate themselves from competitors and comply with regulations such as the European Union's Conflict Minerals Regulation.**

With this in mind, we can now progress to review a selection of responsibly sourced gold mining ETFs.

Responsibly Sourced Gold Mining ETFs

What I love about ESG is that it's all about providing investors choice.
Kunal Kapoor
Morningstar CEO

The Sprott ESG Gold ETF and the AuAg ESG Gold Mining UCITS ETF are two ETFs that enable investors to gain access to responsible gold mining companies. **A key advantage to ETFs of this kind is that they offer investors an opportunity to invest in responsible gold mining without having to undertake their own due diligence.** Moreover, the ETFs provide investors with exposure to a diversified portfolio of companies, which helps to mitigate the risk associated with investing in individual companies.

Sprott ESG Gold ETF (SESG)

You've got to have the dream, right? You've got to have the dream you're going to find something.
Eric Sprott

The Sprott ESG Gold ETF (SESG) aims to establish trust, transparency, and traceability in the sourcing of gold. Currently, the gold is sourced directly from Agnico Eagle Canadian mines, including Canadian Malartic. **However, over the long term, the ETF is able to source gold from other North American operators that meet Sprott's ESG screening criteria.** The mines from which the ETF sources gold must also comply with the World Gold Council's Responsible Gold Mining Principles (RGMPs) and Towards Sustainable Mining (TSM) standards. Recycled gold and gold from any nonapproved mines are excluded in Sprott ESG-approved bars.

Sprott Comprehensive, Multi-Factor Review Process

Source: Sprott Asset Management

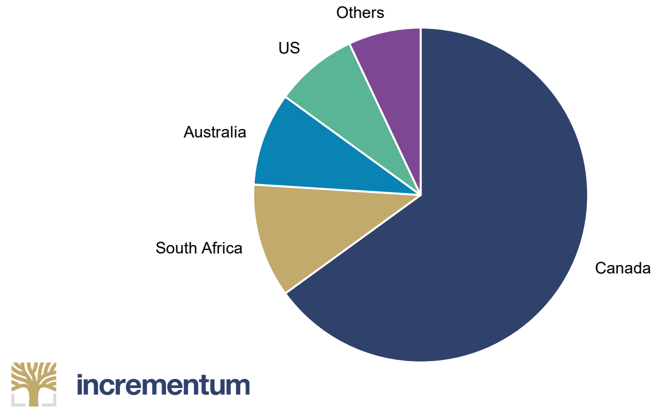
The majority of the fund is expected to consist of fully allocated unencumbered physical gold bullion held by the Royal Canadian Mint on behalf of the fund, which qualifies as Sprott ESG Approved Gold. **As of May 2023, the fund holds a combined 6,982 ounces of allocated and unallocated gold, with a total net asset value of almost USD 14mn.**

AuAg ESG Gold Mining ETF

We see a golden future for precious metals and their miners, as we all live in a world with unabated money printing, but also because of the unique properties of the metals making them essential in many high-tech products and truly enabling the green transformation.
Eric Strand, AuAg

Introduced in July 2021, the AuAg ESG ETF is an product which invests in gold-related companies and prioritizes ESG criteria during the selection process. This process evaluates environmental factors such as carbon emissions and water usage, social factors such as labor practices and community engagement, and governance factors such as board composition and executive compensation. **Canadian companies dominate the ETF's portfolio, making up 65.4%, whilst US companies represent less than 8.0%, despite the US's being the fifth-largest global gold producer.**

Solactive AuAg ESG Gold Mining Index Composition by Countries, 03/24/2023

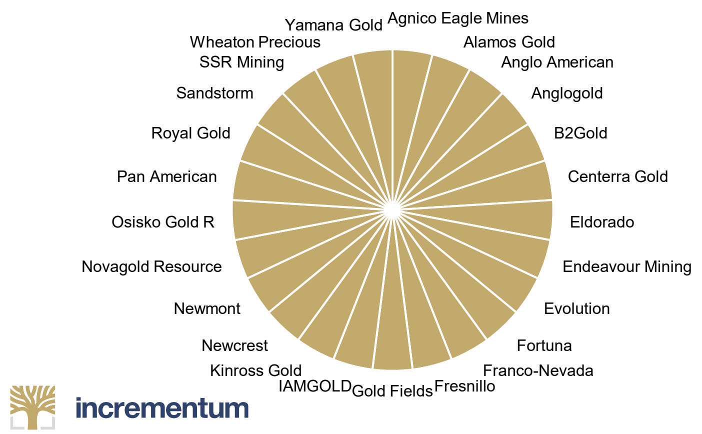


Source: Solactive, Incrementum AG

Diversification is a protection against ignorance. It makes very little sense for those who know what they're doing.
Warren Buffett

A further characteristic of the AuAg ESG ETF is that it limits each company to a position of around 4% in the portfolio, as well as creating an equal-weighted design to avoid concentration risks. This helps to prevent the combined weighting of two companies from reaching 25–35%, whilst also providing more exposure towards smaller large-cap and mid-cap miners. Thus, a higher return potential for the AuAg ETF is possible, versus market-weighted ETFs, in a bull market for gold.

AuAg Gold Mining ETF Target Weighting, 05/12/2023



Source: AuAg Funds, Incrementum AG

In summary, the AuAg ESG ETF is an investment product for those seeking to invest in the gold industry while integrating ESG factors into their investment strategy. **Along with innovative investment vehicles such as the aforementioned Sprott ESG Gold ETF, these funds can alleviate the**

burden on investors of creating their own ESG-themed investment models, all while ensuring financial performance is not compromised.

Conclusion

One key reason market societies are struggling to solve ecological problems is that financial statements do not yet reflect the physical reality of which we are newly aware.
Duncan Austin

By adhering to ESG principles and engaging with the community, gold mining companies can foster positive change and pave the way for a more sustainable future. As demonstrated through our premium partners' actions with respect to community engagement, there are multiple reasons to be optimistic about this future, especially considering how far we have come since the abhorrent conditions endured during the Industrial Revolution.

There are further reasons to be optimistic, as well. Consumers and investors are becoming increasingly aware of mining's impact on the environment and local communities. Responsible sourcing initiatives and certifications, such as Fairtrade Gold and the Responsible Jewellery Council, provide more options for those seeking to ensure that their gold purchases are ethically and sustainably sourced.

However, the responsibility for sustainability and ethical sourcing does not solely lie with the miners and the jewelry industry. Consumers also have a role to play in creating demand for responsible gold and holding the entire supply chain accountable for their practices. **By choosing to buy from companies that prioritize sustainability and ethical sourcing, investors can send a strong message that they care about the impact of their investments.**

In conclusion, the increasing demand for responsible gold is a positive trend that has the potential to drive constructive change in the industry. While there is still much work to be done, we as investors can all contribute to creating a more sustainable and responsible future for the gold mining community. **Ultimately, with the existence of challenging headwinds such as resource nationalism and automation, the importance of creating an environment where miner-community engagement can thrive is a priority that cannot be stressed enough.**

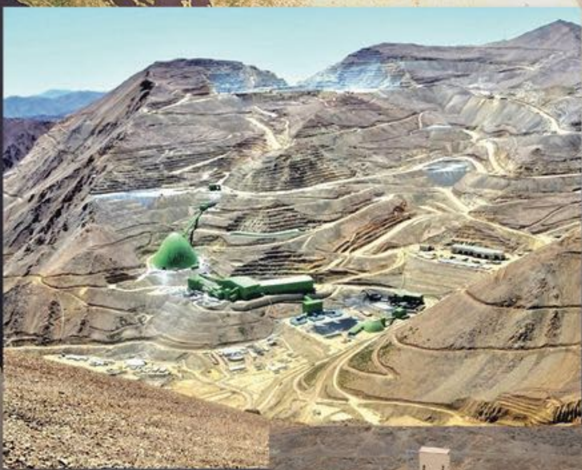
EMX ROYALTY CORP
THE ROYALTY GENERATOR℠

Unearthing Opportunity. Discovering Value.

TSX.V: EMX
NYSE American: EMX
Frankfurt: 6E9

52-week High: $3.05 / Low: $2.18

EMX Royalty holds a significant royalty over Zijin Mining's giant Timok Copper-Gold Project in the Bor District of Serbia.*



EMX holds a 0.7759% Net Smelter Royalty on the operating Caserones Copper-Molybdenum mine, where EMX enjoys current and expects continued long-term cash flow.

* EMX's 0.5% NSR royalty is subject to reduction only as provided in the royalty agreement.

EMX Royalty holds a 1% gross smelter royalty over a portion of Nevada Gold Mines' Leeville (left), Four Corners and Carlin East deposits, providing the Company with ongoing cash flow.

- Transformative Cash Flow Projected In 2023 from Production Royalties On Gold, Silver, Copper, Zinc, Molybdenum and Lead
- Major Investors In EMX Shares Include EMX Management, Directors and Employees, Franco-Nevada, SSR Mining, Stephens Investment Management, Sprott Inc, Adrian Day Asset Management, US Global Investors and the EuroPac Gold Fund
- Incoming Cash Flow From Production Royalties, Advance Royalty Payments, Milestone Payments, Managements Fees, and Annual Property Payments

EMX Royalty is *The Royalty Generator*

The Company enjoys cash flow from royalty assets which it generates organically and through value-driven acquisition. EMX's royalty generation business model supports global precious, battery and base metals exploration leading to the organic creation of mineral royalties.

The Company has royalty and exploration properties in the United States, Canada, Sweden, Finland, Norway, Serbia, Australia, Turkey, Argentina, Chile, Peru, Mexico and Haiti.

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Capex Comeback: A Raging Bull Market for Commodities Beckons

The (commodities) bull market is based on three pillars: geopolitical conflict, a capex-led cycle, and widespread risks to supply.

Marko Papic

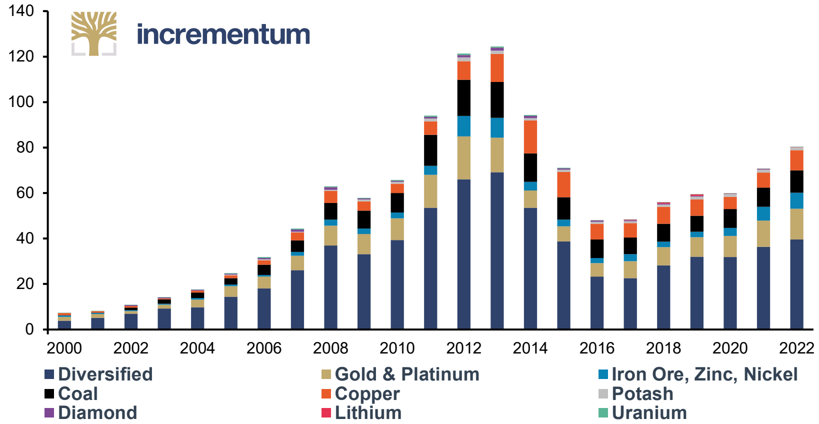
- **After a prolonged lack of capex in the resource sector that defied the conventional market mechanism, we are witnessing a turning of the tide moment for capex in 2023.**
- **The early stages of capex's return is being spearheaded by oil and gas, where OPEC+ cuts and China's lockdown re-emergence are creating a supply-demand mismatch that paves the way for higher prices.**
- **Whilst yet to fully take hold, the progress of green capex is following close behind the Old Economy. Here, an already dwindling supply of green commodities looks set to be exploited by a demand insulated by government policy and EV legislation.**
- **Going forward, the persistence of these supply-demand dynamics will cause commodity price hikes across the board, until prices reach a threshold of attractiveness whereby capex is fully enticed.**
- **At a time where supply is on the backfoot and commodities are historically undervalued, capex's heavily anticipated return will mark the dawn of a new commodities supercycle that has the potential to be explosive to say the least.**

Re-evaluating Our Position in the Resource Investment Cycle

A great rotation is upon us, and this commodities cycle is likely only getting started.
Tavi Costa

As part of the *In Gold We Trust* report 2022, we outlined how the market mechanism that typically facilitates the rotation of capital expenditure (capex) into the resource sector was blocked by non-market phenomena, namely ESG policy and geopolitical tensions.[80] During this period, we saw the lowest level of new oil and gas discoveries in 75 years, whilst metals key to the rollout of renewables, such as copper, experienced no new greenfield project approvals, causing unprecedented long-run supply shortages that threaten the feasibility of the energy transition timeline. **Importantly, this theme is not one that was exclusive to last year alone. In fact, the absence of capex has characterized the resource sector for a much more extended period.**

Top 40 Mining Companies CAPEX Expenditure, in USD bn, 2000-2022



Source: Clocktower Group, Incrementum AG

Demand weakness can relieve the symptoms of underinvestment—commodity inflation—but cannot cure the underlying illness of inadequate production capacity.
Jeffrey Currie

As a direct result of this prolonged absence of investment into commodities, the resource sector now finds itself significantly behind the curve when it comes to meeting the demand of a growing population, which according to the UN, is expected to reach USD 8.5bn in 2030 and USD 9.7bn in 2050. This demand had been dormant throughout the pandemic, further disguising the extent of an underinvestment disease that had started to incubate as early as 2014. **However, it will be bolstered in the long-term, as annual demand from clean energy technologies is set to reach more than USD 400bn by 2050.**

In the long run balance sheets matter. And everybody here forgot that energy matters.
Luke Gromen

With the resource sector already on the backfoot - thanks to the cavernous gap between net zero expectations and reality - miners are now being called upon to utilize their improved financial positions to accelerate towards meeting the growing demand for commodities, in particular, green metals. In 2022, miners' revenue grew 32% , net profits were up 127%, and capex also increased by 18%. However, it is not as simple as directing this increased capital towards new projects. **An impending era of deglobalization and a reversion back to protectionist policies will compromise the once "*unfettered access to critical minerals*," to quote our good friend Paul Wong at Sprott.** This is

[80] "The Status Quo of Gold Relative to Stocks, Bonds, and Commodities," *In Gold We Trust* report 2022

just one of a myriad of blockages in the plumbing of the resource sector that will need to be alleviated if capex is to be allowed to flow through.

Old Economy Plagued by a Decade of Capex Obstructions

The energy transition plan has been undermined by unrealistic scenarios and flawed assumptions because they have been mistakenly perceived as facts. For example, one scenario led many to assume that major oil use sectors would switch to alternatives almost overnight.
Amin Nasser

In recent years, oil and gas has been one of the most notable victims of capex scarcity in the resource sector, with Saudi Aramco CEO Amin Nasser outlining in September 2022 how oil and gas investments fell by more than 50%, from USD 700 bn in 2014 to a little over USD 300 bn in 2021. In times of high inflation rates, this decline is even more pronounced in real terms, however this should not take away from the cause of the substantial drop. As mentioned in the *In Gold We Trust* report 2022, sustainability pledges and ESG commitments have been a significant contributor to this clamp-down on capital flows into oil and gas, with the Net Zero Banking Alliance (NZBA) leading the charge for financial institutions.[81] **Since its founding in April 2021, the NZBA claims it has tripled in size from 43 founding members to 122 member banks in 41 countries – a now 40% share of global banking assets.** Constituents of this group, including Lloyds and HSBC, halted financing for new oil and gas fields in 2022. **This collective opposition demonstrates just one of the obstructions that oil and gas projects have faced when raising capital and simultaneously serves as an explanation for the lack of capex**.

He (Biden) wanted me at the White House to sing the song.
Don McLean

A further obstruction to higher oil prices – and ultimately more capex – has been the Biden administration's depletion of the US Strategic Petroleum Reserve, which in the runup to March 2023 saw a record 266mn barrels of oil removed from the SPR's 638mn barrel January 2021 total. Perhaps Biden is in some kind of Don Mclean induced trance here. After his enamored reaction to South Korean President, Yoon Suk Yeol's rendition of the 1972 chart topping hit "American Pie" at a recent state dinner, Biden appears to be continuing down the road of SPR degradation to the tune of the song's lyrics: "*He drove his Chevy to the levee but the levee was dry*".

Well, I'm not gonna give them oil prices. I'll give them quail prices.
Daniel Plainview, There Will Be Blood

Irony aside, these actions arguably contributed to artificially suppressed oil prices that dampened the prospect of explosively higher capex, whilst it also likely instigated the significant price volatility endured by oil in the last couple of years. According to Goldman Sachs' 2023 Commodity Outlook, "*Underinvestment in production leads to a depletion of inventories, removing a key buffer against fundamental shocks on prices, raising price volatility*" as the system "*becomes vulnerable to demand shocks*".

Despite this, there are other reasons for the lack of capex in oil and gas, as commodity price volatility can also be partly attributed to the Ukraine war. Here, Sanctions on Russia provoked a redirection of its exported oil towards the likes of China and India, thus creating supply chain uncertainty – at least temporarily. **Of course, we must not become transfixed with this blanket explanation as the dominant cause of low oil & gas capex, as**

[81] "The Status Quo of Gold Relative to Stocks, Bonds, and Commodities," *In Gold We Trust* report 2022

the origin of the shortage extends back to long before the onset of this war. However, there is still some benefit for commodities here, as whilst war of any kind is condemnable from a humanitarian perspective, it does bring about a positive reprioritization of investment allocation, into areas of the economy that are needed for human flourishing. For example, investment into commodities and infrastructure as opposed to investments that are more discretionary. This stems the argument of our good friend, Marko Papic:

> *"As we recently concluded, 'war is good.' It leads to governments re-engaging with technological innovation, spending money and guiding capital with a very visible hand towards those technologies that have the greatest impact on productivity and human development – as opposed to letting Sand Hill Road VCs direct trillions worth of capital into mindless apps."*[82]

The Copper Conundrum

Get you a copper kettle, get you a copper coil, fill it with new-made corn mash, and never more you'll toil.
Bob Dylan

Nonetheless, the reverberating effects of the war have yet to yield any benefits for copper - a base metal that in the words of Wood Mackenzie "*will bind and connect batteries, motors, and electrical networks in the form of wire, cable, and foil*". **The eternal metal is renowned for its unrivalled utility, yet it is amongst the worst affected by a shortage of capex and is by no means ready to be passed the baton from oil and gas.**

According to the Head of Base Metals Supply at the Commodities Research Unit (CRU), Erik Heimlich, the world needs eight projects the size of Escondida in Chile – the world's largest copper mine – in the next eight years if we are to close the copper supply gap over the next decade. The gap is estimated at 6mn tonnes per year, with an annual supply deficit of 4.7mn tonnes still probable by 2030. Heimlich continues:

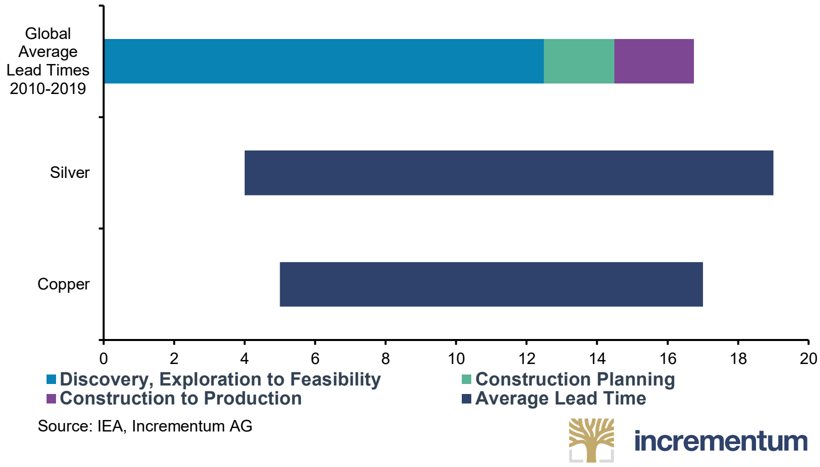
> *"Historically, the completion rates of these (copper mining) projects have been low. A large share of the greenfield possible projects in 2022 remain under-developed so there are questions about the ability to respond to the supply gap in an efficient and timely manner."*

Said woman take it slow, and it'll work itself out fine. All we need is just a little patience.
Guns N' Roses

This – combined with the fact that mining project development lead time for copper (and silver) can be up to 15 years – provides an insight as to why new capex into renewables is proving to be hesitant thus far. The mere distant expectation of a significant increase in supply for both silver and copper acts as a deterrent.

[82] Papic, Marko: „Commodities Is the Supercycle Still on?", Clocktower Group, *AACT*, April 2023

Average Mining Project Development Lead Times for Silver and Copper



Source: IEA, Incrementum AG

Although extended lead times for mining project development are one reason why there is a lack of capex being drawn into renewable energy, there is also a significant operational issue arising from chronic shortages of skilled labor that exacerbates the problem. **According to the IEA, 92% of US project developers are reporting difficulty finding qualified labor for solar PV manufacturing, whilst Germany - Europe's largest solar market – is forecast to have a shortage of 5mn workers by 2030.**

I suppose our capacity for self-delusion is boundless.
John Steinbeck

When measured against targets set by the US Department of Energy, such as: "*solar will grow from 3% of the US electricity supply today to 40% by 2035 and 45% by 2050*", it would be fair to argue that with only 8% of the necessary workforce fulfilled for solar PV manufacturing, the reason for the lack of capex in the renewable sector is obvious. **Those responsible for allocating capex to copper have concluded that the dream of achieving a green utopia, within the prescribed timeframe, is a delusion.**

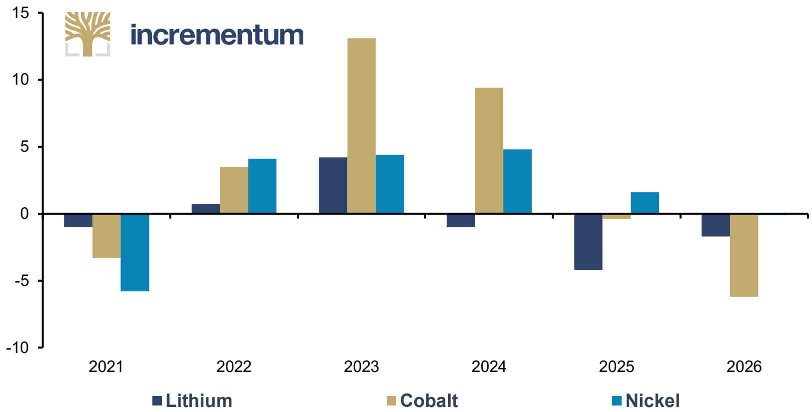
Despite this pessimistic tone, we expect that the outcome for commodities will be more optimistic with a longer time horizon. When technological innovation in commodities has displaced the likes of oil, coal and even lithium-ion batteries, we would likely see a falling of commodity prices, as supply of commodities becomes more abundant. **This would mean a progression through the next stages of the capex cycle, although getting there will require substantially more green commodities, which we simply do not have a plentiful supply of yet.**

Green Commodities Rocked by Heavy Metal Demand

Do ya wanna get rocked? Let's get, let's get, let's get, let's get rocked.
Def Leppard

Copper and silver are not the only "green commodities" enduring capex induced supply shortages, in the face of substantial demand. **The story is the same for battery metals: nickel, cobalt, and lithium.** Even in spite of what Goldman Sachs referred to in 2022 as a "*capex surge from the late 2010s*" until now for the battery metals, this has been insufficient as far as alleviating medium to long-run supply shortages are concerned.

Battery Metals Market Balance, as % of Demand, 2021-2026



Source: S&P Global Market Intelligence, Incrementum AG

Supply and demand: Two things that will never understand each other. It's like trying to explain algebra to a cat.
Elon Musk

In principle, one should view diverging supply and demand volumes in tables such as the one above with skepticism. The Bank of Montreal points to the unsurprising fact: "*supply must more or less match demand*". Such comparisons are usually based on government targets. Because in a free market, a strong overshooting of demand over supply would lead to strong price increases, which would push those not willing to pay the increased market price out of the market, thus enabling the necessary balance of supply and demand. Political guidelines, on the other hand, have an explicit or implicit quantity target that, especially when ideology is involved, deviates significantly from current and sometimes also future supply volumes. The result is not only sharply rising prices, but also significant delays in implementing the political agenda.

Creativity and technological progress have the potential to reduce future demand volumes and increase supply volumes. Tesla's decision not to use permanent magnets made from rare earth elements is an example of this kind of substitution, reminding us how important it is to consider these metals in the context of a broader market that offers a wealth of alternative resources.

For the world to fully transition to EVs and renewable energy sources, investors will have to participate in an absolute orgy of industrial metal capex.
Marko Papic

However, even with this important point considered, the fact remains that battery metals such as cobalt, lithium and nickel function as important components in the energy transition, yet lack the readiness of supply to fully change guard with hydrocarbon alternatives that make up 81% of total energy. Supply of lithium over the past 5 years has increased 6% per year, nickel by 5% and cobalt by 8%. If we extend the time horizon further to 2030 based on net zero by 2050 scenario, demand is projected to increase by 30% per year for lithium, 11% for nickel and 9% for cobalt. (IEA) **Clearly, supply has some catching up to do.**

One of the ways this could be done is through innovation which, according to the IEA, "*can help bridge the gap between demand and supply of metals for batteries*". Direct lithium extraction (DLE) is an example of this, as it "*bypasses the time-intensive need to evaporate the unconcentrated brine water and chemical removal of impurities*" and "*extracts lithium from* *unconcentrated brine either through adsorption, ion exchange or solvent extraction techniques*".

Ultimately, there will need to be more innovation in battery metals' production if the world is to make any meaningful strides towards net zero. **Moreover, a dramatic increase in supply and a magnitudinous inflow of capex will be required, but this will be met with the challenge of a wider geographical distribution of the "green metals" versus hydrocarbons.**

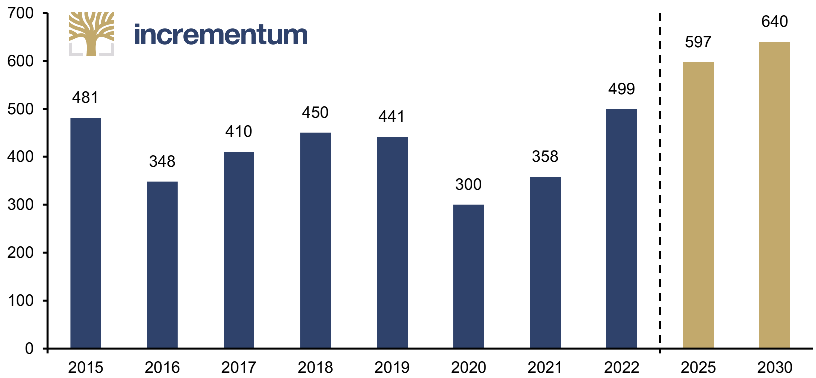
Here, we have a situation whereby allocating capital to new projects is more fraught with layers of international complexity, as a greater number of cross-border agreements must be established to ensure domestic supplies of green commodities. Not only this, but the phenomenon of China's renewable dominance paired with its ongoing tensions with the west, creates a scenario where diversification away from the Middle Kingdom will be necessary to ensure energy security. **This manifests a level of geopolitical risk that explains the tentativeness of capex into green commodities thus far, and simultaneously illustrates why more tried and tested alternatives such as oil and gas are leading the uptick in capex.**

Oil and Gas Fueling the Capex Resurgence

To have a comeback, you have to have a setback.
Mr. T

After being told to hang up its boots by its ESG opposition, the old economy is back to break the capex deadlock, this time, as a substitute for the lacking availability of green commodities. This capex comeback is being spearheaded by global oil and gas upstream capex, which increased by 39% in 2022 to USD 499bn – the highest level since 2014 and the largest year-on-year gain in history. **By 2030, Global Oil & Gas Upstream capex is forecast to rise to USD 640bn.**

Global Oil & Gas Upstream CAPEX, in USD bn, 2015-2030



Source: IEF, S&P Global Commodity Insights, Incrementum AG

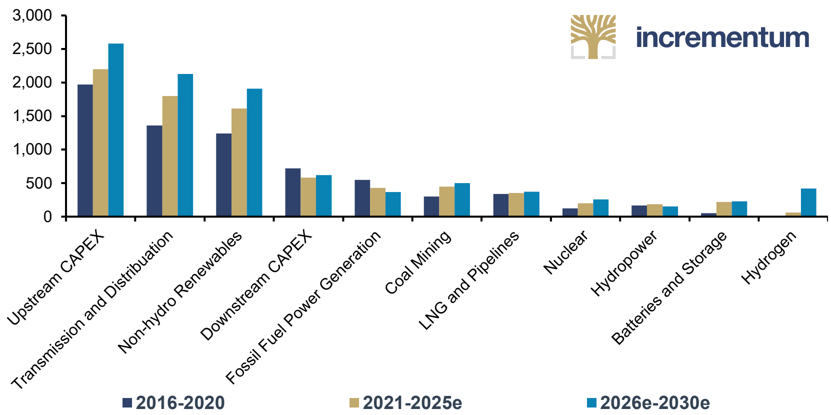
According to the IEA's March 2023 *Oil Market Report*, "*world oil demand growth is set to accelerate sharply over the course of 2023, from 710 kb/d in 1Q23 to 2.6 mb/d in 4Q23*" – with global oil demand set to reach a record 102mn barrels per day in 2023. The IEA also forecasts that "*record oil supply this year (2023) will* *not meet demand*" – expecting it to "*fall short in the second half (of 2023) when seasonal trends and China's recovery are set to boost demand to record levels*".

We are here to stay as a moderating force, to bring about stability.
Abdulaziz bin Salman, Saudi Arabian Energy Minster

This creates a supply/demand mismatch that has recently been exacerbated by the OPEC+ decision to cut production for the second time within the last 6 months – this time in March 2023 by 3.66mn bpd or 3.7% of global demand, which resulted in oil benchmarks rising 6% and Wall Street analysts increasing 2023 price forecasts to nearly USD 100/bbl. **Add to this OPEC+'s previous October 2022 cuts of 2mn bpd, the diminishing reserves of the US Strategic Petroleum Reserve, as well as the aforementioned long-run supply shortages facing green commodities, and you have a recipe that has been perfectly concocted to induce higher oil prices for the foreseeable future.**

Car Manufacturers Driving Imminent Green Capex Boom

Global Energy Spend by Segment, in USD bn, 2016-2030e



Source: IHS Markit, Incrementum AG

Whilst slower off the mark, green capex into non-hydro renewables will eventually follow suit of the old economy too, with the arrival of investment by industrial companies. The influx of capex into green commodities such as nickel, cobalt, and lithium is being driven largely by car manufacturers, who are partially responsible – largely influenced by net zero targets – for facilitating a conversion from petrol and diesel dependence to renewable energy sources. **Born primarily out of concerns over "*security of supply rather than simply price risk*", car manufacturers have started to make investments in these green assets, with strategic supply agreements being put in place to consolidate "*some certainty for producers in terms of volume and price*", according to the Bank of Montreal**.

Gentlemen start your engines!
Grateful Dead

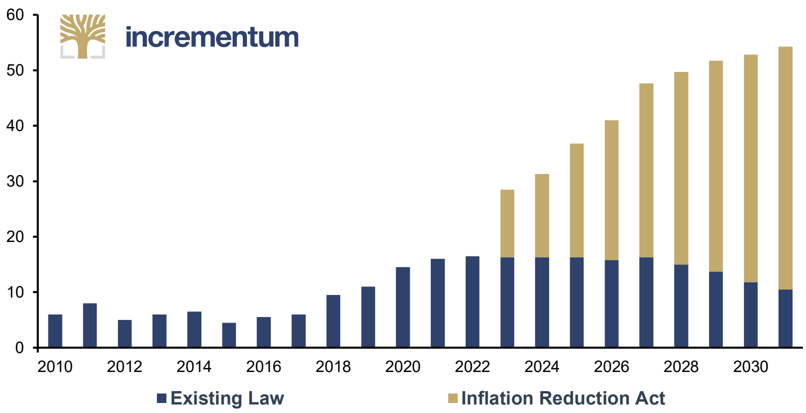
As a result, Stellantis – the parent company of Peugeot and Fiat – has acquired a 14.2% stake in McEwen Copper for USD 155mn, whilst GM plans to invest USD 650mn in Lithium Americas Corp and reached an agreement to buy nickel sulfate from Brazilian mining giant Vale. Moreover, Volvo Trucks have partnered with mining company Boliden to implement electric truck transport in underground environments – showing a different style of miner-manufacturer integration to competitors – whilst Tesla has held discussions over a 20% stake in Glencore and is purported to be purchasing lithium miner Sigma Lithium. Despite this, Elon Musk has yet to execute on either of these moves, although he has announced an initiative that would see Tesla recycle the metals utilized in its car batteries.

Government Policies Lend Helping Hand to Green Commodities

Our administration has invested billions of dollars to boost clean energy production. That means building thousands of new wind turbines and massive solar farms…and it also means giving families money to install solar panels on their homes.
Kamala Harris

Government policies are also boosting the hopes of further capex into green commodities, with the US government's Inflation Reduction Act providing generous tax incentives, grants, and loan guarantees that align with its goal of substantially lowering the nation's carbon emissions by 40% by 2030. As part of this, around USD 370bn will be allocated to measures centered around improving energy security and accelerating the clean energy transitions, with the extension in tax credits for renewable infrastructure expected to push US solar demand higher by 30%.

US Government IRA Tax Incentives, in USD bn, 2010-2031

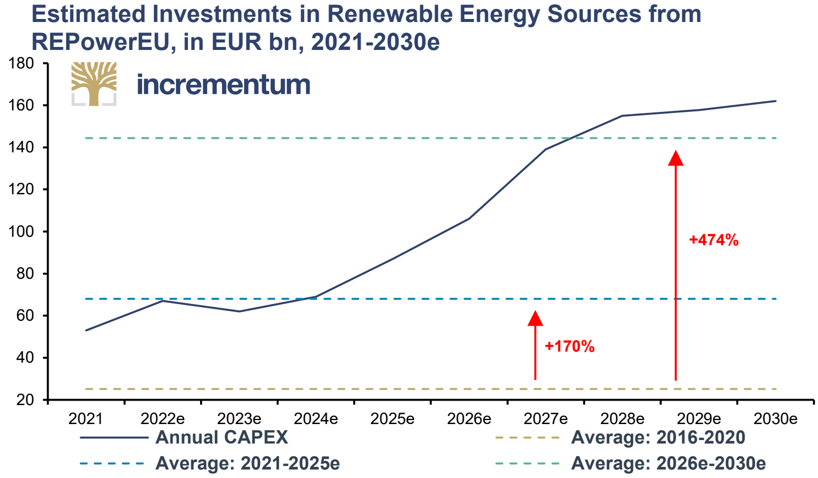


Source: Goldman Sachs Global Investment Research, US Treasury, CBO, Incrementum AG

Nobody cares, work harder.
David Goggins

This will have a direct impact on the likes of global copper and aluminum demand, which are expected to increase by 0.6% (copper) and 0.65% (aluminum) between 2022-2030, on the back of the Inflation Reduction Act alone, according to Goldman Sachs. **The consequence here is that that an already challenged green commodity supply will now have to work even harder to meet new demand.**

In addition, we have seen the advent of the EU's "REPowerEU" plan that "*sets out a series of measures to rapidly reduce dependence on Russian fossil fuels and fast forward the green transition*". **The initiative consists of over EUR 1trn invested into renewable energy sources by 2030, as well as EUR 700bn invested into power networks** – a move that also seeks to reduce the likes of Germany's dependence on coal, which accounted for almost a third of its total electricity production in 2022.



Source: Goldman Sachs Global Investment Research, Incrementum AG

The proposed regulation (Net Zero Industry Act) is a key part of the European Green Deal Industrial Plan – the bloc's response to Washington's massive green subsidies package.
European Commission

Western countries' policies will hasten the pace of the green energy transition, and the EU's attempts could be more impactful than the US' in light of the March 2023 "Net Zero Industry Act" – the European rival to the US' Inflation Reduction Act that looks to establish "*a framework of measures for strengthening Europe's net-zero technology products manufacturing ecosystem*". **Despite this, the future of green commodities predominantly depends on China – a country responsible for 60% of all green metals refining capacity, except copper which is "only" at 40%.**

The economic monolith from the east showed great fortitude in 2022 in respect to green capex, with investments in renewables increasing 42% year on year in 2022, accounting for 66% of total investments in power supply. A resultant outcome from this is an expected increase in energy storage installations by 90% on average between 2022-2025, which will drive total lithium demand 11% in the same period.[83]

He who cheats the earth will be cheated by the earth.
Chinese Proverb

Unfortunately for net zero targets, these green gains are trivial to an extent, as coal was responsible for nearly 60% of China's electricity production last year. Its continued output helped drive global coal production to above 8bn tonnes in 2022 – its highest level ever, according to the IEA.

Coal still accounts for about a third of all energy installed globally, but as far as investment in green commodities is concerned, all the government policies mentioned have contributed to a clear international cohesion around the theme of investment in renewables, which when spearheaded by China's re-emergence from lockdowns, should see green commodity demand rise.

Furthermore, considering that virtually no country is currently on track to reach the 1.5°C Paris Agreement target, the likely implication will be not just a small rise in green commodity demand, but a substantially explosive uptick, as governments will try to hasten the pace of their policy implementation to close the gap on their climate commitments.

[83] Goldman Sachs: "Green Metals – Demand Revolution Gather Momentum," March 2023

When The Levee Breaks

The attempt to raise investment in green commodities bodes well for the alleviation of long-term supply woes. **However, the prolonged lack of capex in the resource sector - that has plagued green commodities and the wider old economy for over a decade now - cannot be remedied overnight.**

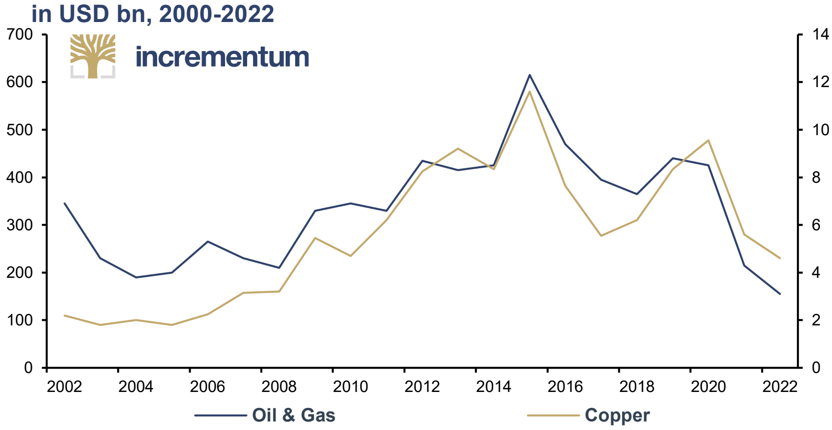
Significant lead times and labor shortages facing commodities such as copper, silver, nickel, cobalt, and lithium, mean that the capex devoted by industrials, and the government policies intended to entice new capex, will take substantial periods of time to have an effect. **Therefore, supplies of these commodities are likely to remain in deficit for the medium to long-term.**

As for oil and gas, upstream capex rose sharply in 2022 on the back of years of underinvestment, with the resultant supply and demand mismatch set to be exacerbated this year as China re-emerges out of lockdown. **This will translate into demand outstripping supply more severely than previously anticipated in light of the additional OPEC+ supply cuts, which seem to have caught the US off-guard, as they continue to deplete their SPR at an alarming rate.**

If no resistances or obstacles face you, you must create them. No seduction can proceed without them.
Robert Greene

This supply demand mismatch in both the old economy and the green economy has exacerbated an already historical undervaluation of commodities, when contextualized within the last century of monetary history. **In fact, capex's reluctance to be seduced by higher prices has laid the foundation for a long-run commodity bull market not seen since the late 1990s.**

Real (2002) CAPEX, Oil & Gas (lhs), in USD bn, and Copper (rhs), in USD bn, 2000-2022

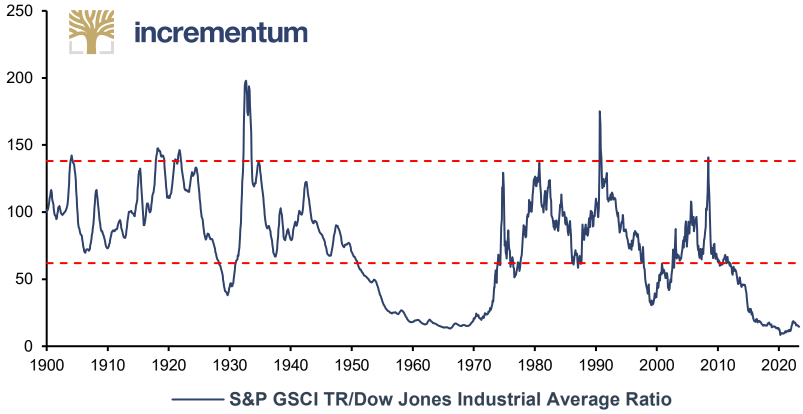


Source: Goldman Sachs Global Investment Research, Incrementum AG

Down cycles are not fun. But they form the basis for enormous future profitability.
Steve Schwarzman

Commodity prices have never been this cheap relative to the US stock market (Dow Jones Industrial Average) apart from three other periods – 1929, the late 1960s, and the late 1990s. In each of these instances, when the S&P GSCI dropped below 50, a substantial commodities bull market followed.

S&P GSCI TR/Dow Jones Industrial Average Ratio, 01/1900-05/2023



Source: Goehring & Rozencwajg Associates, Reuters Eikon, Incrementum AG
*Goehring & Rozencwajg Commodity Index pre 1970

According to our friends at Goehring & Rozencwajg, "*a natural resources equity portfolio that consisted of 25% energy, 25% metals and mining, 25% precious metals, and 25% agriculture would have significantly beaten the stock market in each of these cycles*".

God is not a commodity trader. The evidence suggests that God doesn't even like commodity traders.
Larry Williams, Commodity Trader

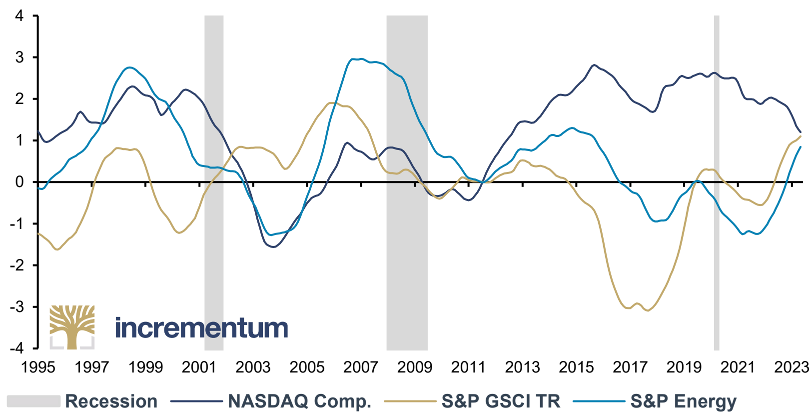
This means that during the great depression, commodities would have proven to be a formidable refuge from the deflationary environment and dire stock market returns of 1929–1940, returning 122% in the same period. For the inflation-laden 1970s "*a similarly constructed natural resource equities portfolio would have returned 400% by 1980*" versus the stock market's 80% for the decade. And for the 1999–2010 period, in which investors were subjected to an irrational exuberance fueled dot com bubble and a global financial crisis, a similar natural resource portfolio would have returned 360% versus a close to zero return for the stock market in that period.

On a verge is not the dead end but is to give a new start to something else.
Surbhi Khurana

Today, we find ourselves on the verge of the collapse of what we referred to in *In Gold We Trust* report 2022 as the *Everything (except commodities) Bubble*. As part of this, we would see a re-inversion of stock market gains for the likes of tech stocks, combined with the nascency of a new commodities bull market that looks destined to surpass the length and severity of all of those that came before it. This sentiment is also echoed by Goldman Sachs' Commodity Outlook 2023:

> *"We are getting close to this rotation away from growth in big tech towards growing profits from energy & industrial firms. The 3-year moving average of the Sharpe ratios are beginning to converge and history suggests that when these two cross, capital begins to flow away from big tech and into the old economy".*

3 Month Rolling Sharpe Ratio (3 Year Average), 01/1995-05/2023



Source: Reuters Eikon, Incrementum AG

The bottom line for both the green and old economy is that there will continue to be significant pent-up pressure on commodity prices that will only make them more prone to an explosive rise.

A Foreboding Sign: Levee Breach, 1927 Mississippi River Flood Prior to 1929 Great Depression

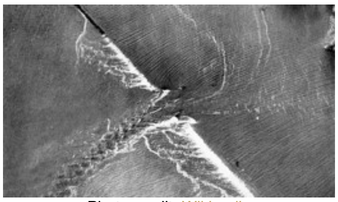


Photo credit: Wikipedia

As commodity prices rise, ESG concerns and geopolitical embankments – which have acted like a levee against new waves of capex for over a decade and have caused chronic underinvestment – will likely be breached due to insurmountable pressure. For example, the Green parties, of all parties, which are involved in government in Germany and Austria, have pushed through a softening of environmental protection procedures for wind energy projects.

Right or wrong, it's very pleasant to break something from time to time.
Fyodor Dostoevsky

And when the levee breaks, we will see capex gushing towards both old-economy energy and green commodities, first enveloping oil, gas, and coal – due to their better affordability and superior immediacy of supply, relative to green commodities – before the blackened tide settles briefly and then a subsequent wave of green capex flows through, flooding into battery metals and the like and turning the overall energy mix a murky green color for the foreseeable future.

Only large-scale capital investments into commodity production capacity to debottleneck the system and provide excess capacity will cure the illness.
Marko Papic

This explosive influx of capex will mark the dawn of a long-awaited and much-touted Commodities Supercycle, which we expect is only in its first or second innings now, with recent upstream capex increases causing the levee to swell but not break. Ultimately, though, it's no surprise that the old economy is re-emerging out of its lassitude, as without an imminent injection of capital's antidotal properties, the resource sector would remain stuck in a state of malnourishment. A continuation of this would leave the wider economy in limbo, forced to make do with increasingly dwindling resources**.**

Exclusive Interview with Russell Napier: Save Like a Pessimist, Invest like an Optimist

The inconceivable is absolutely conceivable when the survivability of the state is threatened.

Russell Napier

- Debt-to-GDP ratios in the developed world are at historically high levels. Financial repression has been used as a policy tool to reduce these levels in the past.
- Various governmental bodies have stepped up to ensure that large-scale depositors have not lost any money in banking system collapses. These guarantees can lead to an increase in government debt and thus governments are now getting more actively involved in the asset side of the balance sheets of banks to direct the flow of credit where they want it.
- Governments around the world intervened in their economies during the COVID pandemic. We are now paying the price for that, and that price is financial repression. Commercial banks will become increasingly politicized to achieve political goals.
- Previous financial crises could easily be solved by throwing money at the problem, but the current inflationary environment is a totally different story.
- The global west will need to recapitalize in the case of a cold war with China, which seems likely.
- This is an opportunity for investors to share in the gains from these old economy companies, mainly in the manufacturing and resource sector.
- The upside for gold is if we ever unanchored – and the basis of our conversation is really how they are going to become unanchored. So, there’s plenty of room for upside in gold, just because of that.

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 authored 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.

Russell is Chairman of Mid Wynd International Investment Trust, a GBP 500mn market cap closed-end investment vehicle listed on the London Stock Exchange. He is a member of the investment advisory committees of three fund management companies, Cerno Capital, Kennox Asset Management, and Bay Capital.

In 2014 Russell founded the charitable venture The Library of Mistakes, a business and financial history library in Edinburgh that now has branches in India and Switzerland. Russell has degrees in law from Queen's University Belfast and Magdalene College Cambridge. He is a Fellow of The CFA Society of the UK and is an Honorary Professor at The University of Stirling and a Visiting Professor at Heriot-Watt University. He is a contributing columnist for *The Toronto Star* newspaper. His second book, *The Asian Financial Crisis 1995-1998: Birth of the Age of Debt*, was published in July 2021.

Ronnie Stöferle and Nikolaus Jilch conducted this interview with Russell Napier by Zoom on May 2, 2023.

We are publishing the highlights of the interview below. **The full version of the interview is available for download *here*.**

The video of the entire interview can be viewed on YouTube

What are your next big calls? Would you say inflation and fiscal stimulus are over and it's back to the old playbook.

Ronnie Stöferle
Russell, you've been spot on with your very, very big forecasts. I think your **biggest shift was from being a deflationist for almost a couple of decades, to becoming an inflationist, with perfect timing.** You've said that the Great Moderation is over and that we should expect higher inflation rates and more inflation volatility. This has been a brilliant, brilliant call. Your second big call was that you expected fiscal stimulus to become much more important than monetary policy and monetary stimulus, which also happened. So, Russell, everybody wants to know, what are your next big calls? How do you see those major market calls developing? Would you say inflation and fiscal stimulus are over and it's back to the old playbook?

We know that the goal is to reduce the debt-to-GDP ratio, but how does that manifest itself?

Russell Napier
Ronnie, the things you mentioned are just ingredients. They're not the final, baked product. They're just part of it, and I think that's the problem. I think people can't see that yet. They don't fully understand yet. **But the final cooked product is a thing called financial repression**. I think most people listening to this will be familiar with what that is. It's a policy setting necessary to reduce the excessively high debt/GDP level of the developed world.

The governments increasingly take control of the banking system, which is the wellspring of money creation, and the saving system, which is a necessary thing for them to control in order to depress the rate of interest along the yield curve in a period of high inflation.

The other thing that's happened since we spoke in 2020 is that I'm having difficulty persuading people of this financial repression, although there is ample evidence. **We know that the goal is to reduce the debt-to-GDP ratio, but how does that manifest itself?** I can talk about that for about three hours, but the essential issue is this: **Governments increasingly take control of, A, the banking system, which is the wellspring of money creation, and B, the saving system, which is a necessary thing for them to control in order to depress the rate of interest along the yield curve in a period of high inflation**. High inflation, which they have rather successfully generated, is not in itself sufficient if market-determined rates were to go too high.

Switzerland, shockingly, are now in the business of controlling and corralling the balance sheets of banks and the savings of the people to help with inflating away their debts.

My forecast is not just that inflation will remain sticky, though it will come down; that is part of the growing evidence of a financial repression. This all comes in bits and pieces; that's the nature of government reaction. But let me just quote from the British Chancellor of the Exchequer, who said less than a week ago that, ultimately, he would not be against forcing British pension funds to buy certain assets. The British Chancellor is supposed to be right of center, not left of center. He said he wasn't that comfortable with it, but he wouldn't be against it. **Switzerland, shockingly, are now in the business of controlling and corralling the balance sheets of banks and the savings of the people to help with inflating away their debts.**

Niko Jilch
We've just had another bank failure in the US. Do you see any connection with this? I think the regulator's going to use these bank failures to introduce new rules for banks to make them "safer", but some of the problems came from holding too much government paper.

Russell Napier

When governments rush around trying to make things safe, they don't always succeed in that goal.

Yes, they are going to find other things that will make them safe. That is interesting, as, **when governments rush around trying to make things safe, they don't always succeed in that goal**. The argument is not that they make things safe, it's that they direct the flow of credit. What the government has done – the FDIC, but ultimately the American government, and we also have to keep referring to the Swiss government here –is guaranteed all the deposit liabilities of the banking system; that's the crucial feature of these collapses.

A government that backs the liabilities of the banking system is ultimately on the hook for its assets.

For those that I can think of, none of the large-scale depositors have lost any money. Now, whether the actual bondholders will lose any money, I guess time will tell; but Janet Yellen has slightly flip-flopped on whether the system is now backing large-scale deposits, though I think everybody thinks they are. Warren Buffett has said that they are. **A government that backs the liabilities of the banking system is ultimately on the hook for its assets**. The Irish government tried this on the 30th of September 2008, a day in Irish history that will live in infamy. What they ended up with was government debt/GDP blowing out, as they had to pour more and more money into the banking system to meet these guarantees.

The crucial thing that's happening is the capture of the financial system, not the collapse of the banking system.

Governments know this; they've been here once before. What we'll see now is them getting more actively involved on the asset side of the balance sheet. There's a price to pay, and that is the price, and it's already evident. It's been evident, particularly in Europe, post-Covid; it was evident everywhere during Covid; and that's the price. Now, there are different ways of doing this, and one of them is providing guarantees on bank lending. But the Inflation Reduction Act is another way of doing it. You create so many good incentives and cash flows in certain private sector companies that the banks are encouraged to lend to them. **The crucial thing that's happening is the capture of the financial system, not the collapse of the banking system.**

You have freedom of speech, but freedom after speech, that I cannot guarantee.
Idi Amin

This is the capture of the financial system to do the public good, as the public needs, in a time of serial emergencies. And that is why equities are going up and not coming down. Because this is not a rerun of 2008; this is more a rerun of 2020. There are sufficient emergencies in the world that the government can justify not just bailing out the banks but also taking control over banks and steering bank credit growth. **Now you get two entirely different views of the world, depending on whether you think the banking system is collapsing or the government is taking control of it, and I'm certainly in the latter camp**. It will be quite a shock in America, but my goodness what a shock it will be in Switzerland when it comes to pass there.

Ronnie Stöferle

If we say that fiscal policy is basically taking control, then first of all, what then is left as a job for banks and for central banks?

Russell, in one of your most recent interviews, you said that most people in financial markets still stick to the 2008–2009 playbook. **What people forget is that in 2020 we had basically the biggest GDP decline since 1707**. But we could say that they managed it pretty well. We didn't see any major banks going bust; we didn't see any bankruptcy in bigger companies.

We didn't really see too much volatility in financial markets. So, I agree on that point; but then, on the other hand, **if we say that fiscal policy is basically taking control, then first of all, what then is left as a job for banks and for central banks?** We all have an opinion on that, and the market couldn't care less about our opinion. Are we still in a free market, liberal economy?

Russell Napier

So, the price we're paying for that form of intervention is inflation today; and that inflation is creating not just economic havoc but political and social havoc.

Yeah, so, about 1707. That's just relates to the British economy, and 1707's economic statistics are not entirely trustworthy. But yes, that initial decline in GDP was supposed to be the biggest decline since 1707. What was the price we paid for the success in managing that? Well, the price we paid is that **across the developed world, the banks were forced to lend money into recession and create money.** That's the important thing. That's why we have inflation today. **So, the price we're paying for that form of intervention is inflation today;** and that inflation is creating not just economic havoc but political and social havoc, in some places much more than in others. **There is a price to be paid for this. We've already seen part of what that price is.**

If commercial banks create money, and the government can control the size of commercial banks' balance sheets, that's number one.

What is the role for central bankers? I'm sure everybody listening to or reading this has read Friedman and Schwartz's Monetary History of the United States of America. If you haven't, it may be worthwhile reading the history of the Fed for the period from 1942 to 1951. Because it's quite clear in the pages of Friedman and Schwartz that the role of central bankers from 1942 to 1951 was really to drink coffee. There was no other role for them, and that is because there was a financial repression. Obviously, in warfare there is an extremely strict form of financial repression. It's something I think maybe we're unlikely to see in that form. But Ronnie, you've hit the nail on the head here, because **if commercial banks create money, and the government can control the size of commercial banks' balance sheets, that's number one.**

They will be controlling both the quantity of money and the price of money, and then there isn't anything for central banks to do all day.

If I'm right, we eventually get to the stage where they also do yield curve control. They are controlling both the quantity of money and the price of money, and then there isn't anything for central banks to do all day. I do genuinely think that that is where we're going. I know a lot of people have said to me, "*Will the central bankers give up*?" Well, they announced that we're not going to have 2% inflation. But it just became obvious to the market that the central banks do not have the power to deliver these things; these powers are being stripped from them; and that's the path for central banking. Not that they fail conventionally by having the wrong policy settings, it's that **the tools they need in order to deliver are being stripped from them**. So that's what I think happens to central bankers, and commercial bankers as well. **It's just the politicization of credit.**

I can't remember if I mentioned this book the last time I was here, it is called Controlling Credit. It's a history of the French banking system post-World War Two, written by Eric Monnet. It describes a form of monetary policy which I think is completely alien to just about everybody today, but it's one we have to go back and focus on, and that is **credit controls**. **If a government can cut the rate of bank credit growth, it can cut the rate of money supply growth**. Now, the problem for bankers is, yes, it's quite nice that they get allocated a certain growth in credit, but the government would want to have a huge role to play in the allocation of credit, within, let's say the limit is 10% growth in bank balance sheets per annum. It's inconceivable that that would be done purely by market forces. For commercial bankers, the future is the politicization of their balance sheets to achieve political goals, and those goals are easily framed in an age of emergencies.

And when the word emergency is right up front and center in political discourse, you should expect emergency finance.

I rarely hear a politician speak when he doesn't use the word *emergency*. So, we have a climate emergency – and I'm not saying these aren't emergencies; I'm just saying the word is spreading. We have a hot war emergency, a cold war emergency, an inflation, cost of living emergency, an inequality emergency. **And when the word *emergency* is right up front and center in political discourse, you should expect emergency finance.** The role of the commercial banker in a period of emergency finance is to provide the finance to end the emergency, full stop. That is the future for bankers. Now back to Niko's question. **The more influence and control or safety nets the government provides for these institutions, the more they are ultimately beholden to the government.**

Ronnie Stöferle
You mentioned the topic of war. Last time, in 2021, we were talking about the Cold War. But now we have a hot war between Russia and Ukraine. We interviewed Zoltan Pozsar last week for this year's *In Gold We Trust* report.[84] He wrote a couple of fantastic pieces – you probably read them as well. He said that war means inflation. You probably agree on that topic. Then I also heard a podcast that you did with our mutual friend Marko Papic at Clocktower, and I read a piece that Marko wrote a while ago, called "War is Good". Of course, he doesn't refer to the human consequences of a war, but I think he brought up a couple of very interesting topics.

Over the short term, war could mean higher inflation, definitely. But over the long term, due to more competition and innovation, it could also be a disinflationary driver?

First of all, that investors should avoid extrapolating geopolitical disequilibrium into a global conflict, and that these periods of multipolarity, which often lasted for decades, were often providing a good backdrop for technological innovation. **This capex cycle that you're also referring to, over the short term, war could mean higher inflation, definitely. But over the long term, due to more competition and innovation, it could also be a disinflationary driver**. Would you agree to those viewpoints?

Russell Napier

Now, when I look around at the levels of debt in the system today, and the levels of government debt in the system today, I just don't see how this can be financed without more money.

Marko is from the former Yugoslavia, and I'm from Northern Ireland. So, we're both very keen that there isn't any war, as we all are. I would not agree with Marko on that, and that's because I come from a different place, which is the place of saying that, not with 100% certainty but with a high degree of certainty, that inflation is always and everywhere a monetary phenomenon. It depends how this is financed – all the things that Marko has talked about; it depends how it's financed. **Now, when I look around at the levels of debt in the system today, and the levels of government debt in the system today, I just don't see how this can be financed without more money.**

84 The short version of our interview with Zoltan Pozsar is part of this *In Gold We Trust* report, *see* "Exclusive Interview with Zoltan Pozsar: Adapting to the New World Order". The long version is available here.

The first casualty of war is the truth, and the second casualty of war is price stability.

The easy way to finance anything is by creating more money, and we're witnessing it now. For three years we've witnessed that governments will take the easy way out on this and finance it with more money. That is what happens in war as well. Of course, we have great big bond drives running, and that's what a financial repression is. It's a bond drive to get people to buy bonds at interest rates that are actually well below the rate of inflation. It's also about creating money; so everything that Marko says about the real economy can be true, but you can still have inflation if it's badly financed. **The first casualty of war is the truth, and the second casualty of war is price stability**, and there's a reason for that. It's not just about a scramble for the scarce resources, it's about how it's financed.

That's true now more than ever. Going into other wars we may have had low government debt to GDP, but I was just looking at the British debt/GDP, and let me give you some numbers on that. At the end of World War Two, the government debt/GDP was 270%. By 1991, it was 30%. Now it's 106%. Simply put, all the nice things that we want, and all that innovation, are going to have to be financed.

But, given where we are with debt, I think even a cold war is going to have to come with high inflation. Never mind that we get to a hot war.

We've had a huge debt supercycle, and that means it's going to have to be financed by money rather than debt. That means inflation to me. I hope for a cold war in Asia and not a hot war. Now, let's say I'm wrong on this. It's a truth that we don't like to recognize that the rejuvenation of Asia post-World War Two was partially based on warfare. Initially with the Korean War, which had a very stimulatory impact on Japan, and then latterly the Vietnam War, which had a very stimulating impact on Southeast Asia; and Hong Kong was a beneficiary of both of these. So yes, one can recognize that that's something a hot war can do. **But, given where we are with debt, I think even a cold war is going to have to come with high inflation. Never mind that we get to a hot war.**

Ronnie Stöferle

The capex cycle? I think that's another topic that you were one of the very first ones to address. Could you perhaps run us through the theory you have?

Russell, the capex cycle? I think that's another topic that you were one of the very first ones to address. Could you perhaps run us through the theory you have? Would that actually mean continued outperformance of old economy sectors versus the tech space? Then, one thing that always comes to mind is that I'm not so certain that governments are very efficient when it comes to subsidizing everything and getting into the domain of business owners and investors. If that trend is going to continue, and it seems so, won't it leave us with lots of stranded investments and other things that you can probably mention in your Library of Mistakes, and lots of government-owned companies that are just an enormous waste of capital?

Russell Napier

There are some things changing in heavy-industry stocks that we need to pay attention to.

For those who are listening or reading, in case they don't know, we've had strong run in tech stocks this year. But I just looked, and Nippon Steel is outperforming Amazon – not by a lot; it's not quite as good as Microsoft, but it's nearly as good as Microsoft. Something is happening in the world that we need to pay attention to. **Too often I speak to investors who have their own views but are not prepared to look at what the market is telling them. There are some things changing in these heavy-industry stocks that we need to pay attention to.**

Next time you hear a politician cite an emergency, think to yourself, what's the answer to that emergency? Because I think you'll find it's capex.

What is changing is, I mentioned earlier this age of emergencies, and **next time you hear a politician cite an emergency, think to yourself, what's the answer to that emergency? Because I think you'll find it's capex.** Some of it is pretty dire capex. Completely nonproductive capex is easy to spot; it's called defense. It's capex aimed to destroy rather than capex aimed to facilitate. We know that's going to happen, and we know that *is* happening. And we know that's going to happen on a big scale, because it's happening in Asia. It's not just about Russia; it's about Asia.

If we genuinely get to a cold war with China, we are going to need to produce all the stuff we currently buy from China. That's a huge capital expenditure boom.

One of the things that we're witnessing now is NATO, the North Atlantic Treaty Organization, being somewhat interested in the Pacific as well. So this is important in terms of defense spending, etc. The biggest thing is that **if we genuinely get to a cold war with China, we are going to need to produce all the stuff we currently buy from China. That's a huge capital expenditure boom**. Labor markets are tight, depending on where you are in the market and the world, very tight. That's also a huge capex boom as we go forward. We're going to need more robotics and automation to cope with this. The reason that I come to a capital expenditure boom is that it is, as far as I can see, the only answer to the political problems. **My view is that countries don't just use their own money to finance this; they use the banking system to finance this.**

There's no better example of that than the United Kingdom, again, where the **Chancellor of the Exchequer is getting involved with our savings system and is compelling them or trying to compel them to invest in certain types of things that the government wants financing for**. So that is coming. Now, to your second point, will it be malinvestment? Yes, it takes a while, though. And it particularly takes a while if we're in a cold war with China.

If I asked you how many years of building capacity would we need before we overinvest in the European steel industry? I think it's a lot. What we've had in the past is, sometimes governments have intervened in market systems at full capacity, and then their intervention is visible quite quickly. But on this particular occasion, if the reason for doing it is that we're in a full-blown cold war with China, it might take a bit longer to get there.

No truly productive savings and investments can be made by government, its employees, or the recipients of its subsidies.
Murray Rothbard

But let's remember where the United Kingdom got to in the 1970s. We were spending all our money investing in coal, British Leyland, and Concorde. None of these proved to be viable long-term investments; they all proved to be misallocations of capital. You do get there in the end, but in the industry that we've specifically been referring to, which are maybe more old-economy stocks, it will take a very long time to build capacity. This relates to a form of investing called the capital cycle, which we teach on the course side. Edward Chancellor lectures for us on the capital cycle. I just think we've underinvested for so long that it would take a long time to distort this.

That is the opportunity for investors, to align their interests with these particular corporations that deliver on this.

One final point: the Andrew Smithers book, which is called Productivity and the Bonus Culture. He's got some wonderful long-term charts of US corporate investment in intangible assets as a percentage of GDP. Really, we've just never seen it so low. And, without going into all the arguments for that, it isn't going to stay low; it's going to go up. **That is the opportunity for investors, to align**

their interests with these particular corporations that deliver on this, while recognizing that in the very long run, a government-subsidized price of capital will distort the capital cycle at some stage. But this is a gift horse not to be looked in the mouth.

Ronnie Stöferle

There's lots of older people to steal money from due to our demographics. Russell, I want to segue this conversation in the direction of the current setup that we're seeing in financial markets. Now, the leitmotif of this year's *In Gold We Trust* report is "Showdown", because **we're seeing some sort of a showdown when it comes to the geopolitical arena and the BRICS nations and SCO nations becoming much more vocal in questioning the status of the US dollar**. This de-dollarization topic is something that we have been writing about for quite a while, but now it seems that it's becoming more of a mainstream topic.

We've seen it on Fox; I think the *Financial Times* was writing about de-dollarization, stuff like that. I think that it's a process and will continue to take a couple of years. Michael Cembalest at JPMorgan put out a great paper; he said it's going to take, like, 20 years, because we shouldn't forget that the Chinese also have major problems. It would be naive to think that will happen quickly. He was mostly referring not to the renminbi's status as a *trade currency* but rather as *a reserve currency*. I think that's very important to differentiate.

Or do you think that the forces of fiscal stimulus are so strong as to completely take those recessionary forces out?

The second major showdown that we're seeing in markets is between the Federal Reserve and the economy and financial markets. A year ago, no market strategist or analyst or astrologist would have said that the Fed would raise interest rates by 500 basis points and the S&P would still be trading pretty well and the economy would not be in a major recession or depression. But still, we know that the Federal Reserve and central banks in general are always way behind the curve; so would you say that this recession – that the yield curve, also the ISM as a leading economic indicator, and so many other indicators that are forward-looking – that this recession will happen over the next couple of months? **Or do you think that the forces of fiscal stimulus are so strong as to completely take those recessionary forces out?**

Russell Napier

There's no evidence that the renminbi is being held in reserve currency; it's held by only one central bank in large size, and that is Russia.

So, there's two subjects. The first one is a huge subject: the dollar as a reserve currency, absolutely huge. But you made the distinction which people need to think about more, and they don't, and it confuses the issue, **which is: Saudi Arabia may transact with China in renminbi, but will it hold them?** There is an upside for the Chinese in just merely transacting in it, because it's beyond the long arm of America. The Chinese like it if the transaction takes place, but will Saudi hold it? Well, the evidence we have to date; there are two pieces of evidence that I look at. One is the composition of foreign exchange reserves, which we get every quarter. **There's no evidence that the renminbi is being held in reserve currency; it's held by only one central bank in large size, and that is Russia.** Otherwise, it's tiny, it's absolutely tiny. And, from memory, I think it was in 2014 that the Chinese first opened up their bond market to reserve managers, and the renminbi couldn't really form part of reserves until there was a big, liquid market for you to put it into; and that was the Chinese bond market. And since then, virtually nothing has happened.

The thing that makes the US dollar strong is not that we transact in it, it's that we own it as reserve managers, and in the private sector.

So, we have to say, look, the ability of reserve managers to own this thing has been around for a long time, the amount of trade they do with China has been going up and they still don't hold it. Has something fundamentally changed in the world that would make them hold it? Well, if you're an enemy of the American bloc and perhaps with the interference with Russia's reserve assets, maybe. But the evidence shows renminbi holdings going down. That is because Mr. Putin is having to sell some of his reserves. So transactions, yes, but ownership, no; and it's ownership that counts; it is ownership that absolutely counts for the US dollar. **The thing that makes the US dollar strong is not that we transact in it, it's that we own it as reserve managers, and in the private sector.**

So at least for the last couple of years – and things can change – the evidence is not that people want to hold more renminbi but that they want to hold less.

Then we have some data on the private sector. China, like other countries, publishes a net international investment position. And they reveal in there, as every country does, the value of domestic portfolio assets held by foreigners and also nonliquid assets. That is, the willingness of the foreign private sector to own RMB-denominated assets. That's coming down; it's not going up. It rushed up over six years as we included Chinese bonds in the various global bond indices. But now it's coming down. **So at least for the last couple of years – and things can change – the evidence is not that people want to hold more renminbi but that they want to hold less.** Now, which currency have we worked out that they want to hold more of over the last few years? Probably the one they want to pay a higher price for. And what's the one they want to pay a higher price for? It's actually the dollar.

Switzerland has just intervened and completely overruled private-sector contract law, and the government has a contingent liability, not yet triggered, that is a couple of times bigger than GDP, given Switzerland's role in the banking system.

This could be a long answer, because it's a huge subject; but let's go back to Switzerland. In the period after World War Two, if you wanted to seek to avoid the process of stealing money from old people slowly, you put your money in Switzerland. Some of that was to do with secrecy, but actually a lot of it was to do with the fact that Switzerland could be trusted to uphold the rule of law. The country didn't have a lot of debt, so it didn't need to inflate away debt. So there were two things here: the sanctity of contract and a government balance sheet which did not require the alleviation of inflation. Is that true in Switzerland today? Switzerland has just intervened and completely overruled private-sector contract law, and the government has a contingent liability, not yet triggered, that is a couple of times bigger than GDP, given Switzerland's role in the banking system. We can debate the extent of the guarantees in Switzerland, but I think they are pretty extreme.

She speaks with such imprecision these days that she must have sat at the feet of Alan Greenspan.

So, where do you go with your money? I think more of it goes to America. Then we have this incredible speech by Christine Lagarde two weeks ago [i.e. April 17, 2023], which everybody needs to read; it is just incredible. **As with most of her speeches, it's hard to believe that she used to be a lawyer, actually, because she speaks with such imprecision these days that she must have sat at the feet of Alan Greenspan.** But the speech, vague though it is, raises these huge questions but obviously focuses on the role of central bankers in a world dividing into two systems. I think what is in there is really a concern about the euro as a reserve currency – it is the second reserve currency.

I'm not in the de-dollarization camp, but I can see there'll be some bad headlines coming up, particularly in relation to Saudi Arabia.

And if we become one block, and I think it will be by far the biggest and most dominant block, and coagulate more around the dollar, **maybe we get more hoarding of dollars and fewer holders of euros; that's one of the things her speech provoked in my mind.** As you say, the decline of these things happens over a long time. There is a wonderful book by Katherine Schenk, called *The Decline of Sterling,* which I'm just looking at on my shelf. The decline from starting as reserve currency took a long time. Even after the country was bankrupt in 1945, it still took a long time for this to happen. **So, I'm not in the de-dollarization camp, but I can see there'll be some bad headlines coming up, particularly in relation to Saudi Arabia.**

There could be days, weeks and months where de-dollarization has an effect on the dollar exchange rate, but I don't think that's the world we're living in, and I'm in the other camp. That's only a partial answer to the first question, but that would be my pushback on de-dollarization.

It's really not whether there's going to be a recession, it's what sort of recession it's going to be.

In terms of the second question, it's really not whether there's going to be a recession, it's what sort of recession it's going to be.

Genuinely, as a young investor in 1989 and all the way up until the early 2000s, I didn't conceive and nobody conceived that the threat of deflation could come in a recession. It was thought to be – I heard the word *impossible* used, in a fiat currency system. Then we had a series of recessions where we had deflation, or the risk of it; and it came with massive defaults, massive write-downs in bank assets, significant write-downs in corporate assets; and suddenly we had an entirely different type of business cycle. It was a business cycle where corporate earnings regularly halved.

But I think what we're looking at now is a return to those 1945-to-1990 recessions, because as we saw in 2020, credit continues to flow through the recession.

That was with the addition of a fair amount of accountancy in terms of swinging impaired assets or cheaper assets through the P&L. **But I think what we're looking at now is a return to those 1945-to-1990 recessions, because as we saw in 2020, credit continues to flow through the recession.**

That's fundamentally the difference between a recession that can become a depression and, if you like, an ordinary recession. These interventions in the banking system are absolutely key. Look at First Republic. As far as we're aware, people are still paying interest and principal on their loans from First Republic, but First Republic badly priced their assets and that's been the issue. But they're not impaired assets; unemployment isn't going up.

It's a different form of recession. It's one that comes with not a collapse in corporate earnings; it's one that comes with higher inflation.

Outside of California, we're not looking at a collapse in residential property prices, and yet the government is in instantly to back these banks and instantly to keep credit flowing; and, for what it's worth, the data over the last few weeks shows that bank credit growth is still expanding. In that world, **it's a different form of recession. It's one that comes with not a collapse in corporate earnings; it's one that comes with higher inflation.** In my opinion, it's that form of recession, given what's already happened to the decline in the price of equity since the third or fourth quarter of 2021.

Availability bias makes it so that if you think of the word recession, you think of bank collapse, property price collapse, credit being pulled back, deflation – and of course that's a possibility.

That's why the market is going up; it's beginning to realize that this is a recession where we are socializing risk, where we are taking more risk onto the public balance sheet, and that's good for private-sector assets. So yes, it's a recession; but we have to remember why we constantly talk about recessions. It's not the recession that counts, it's what happens to corporate earnings that counts; and let's recognize that not all recessions are the same. **We all suffer from availability bias, and availability bias in most people is the last recession, and maybe the recession before that.** That availability bias makes it so that if you think of the word *recession,* you think of bank collapse, property price collapse, credit being pulled back, deflation – and of course that's a possibility.

Given the scale of intervention in the system – fiscal but also monetary – that with governments backing the system, we return to recessions that are more like the 1945-to-1990 ones.

I could be wrong; but it seems likely to me, **given the scale of intervention in the system – fiscal but also monetary – that with governments backing the system, we return to recessions that are more like the 1945-to-1990 ones.** By the way, the average decline in EPS in those recessions was 11% – that's right, 11%. Quite a big range, obviously, but an average of 11%. I would say that this market, by last September, had discounted that form of decline in corporate earnings.

Earnings decline in this recession will be more muted than in the past. There's a recession coming, but I don't think there's a huge earnings collapse coming.

The reason that it's completely different is because of accountants' ability and willingness to swing write-offs through the P&L. I think that will happen; and if only for that, **the earnings decline in this recession will be more muted than in the past. So yeah, there's a recession coming, but I don't think there's a huge earnings collapse coming.** Therefore, as we discussed earlier, some equities are doing really well in this politicized system. But equities, generally, are better than bonds in this environment.

Ronnie Stöferle

Russell, we cannot have a conversation with you and not talk about gold. What's your take on the price of gold at the moment?

Russell Napier

The upside for gold is if we ever unanchored (from inflation expectations) – and the basis of our conversation over the last hour is really how they are going to become unanchored.

On the price of gold, I am very optimistic. Of all the things forecasted that came true, the thing that still shocks me is inflation expectations. It's quite shocking; one almost doesn't believe it, when one looks at it, that they're still anchored. Let's use the word *anchored,* central bankers' favorite term. I'm not really sure why they're anchored; I really can't understand it. But they are anchored. **The upside for gold is if we ever unanchored – and the basis of our conversation over the last hour is really how they are going to become unanchored.** So, there's plenty of room for upside in gold, just because of that.

These were the highlights of our interview with Russell Napier. The full version is available for download here.

The video of the entire interview, "Save Like a Pessimist, Invest like an Optimist", where we discuss more topics, including CBDC's, how ESG policy could influence gold miners and why Ronnie's favorite soccer team keeps losing can be viewed here.

Technical Analysis

I have seen the future and it is very much like the present, only longer.

Kehlog Albran

- **The gold price has been *flirting* with a new all-time USD high for a while now.**
- **The Coppock indicator is still on buy, but has formed a small divergence with the price. The KST, on the other hand, turned impulsively upward in the winter of 2022 and could herald an imminent breakout.**
- **Sentiment on gold, silver and miners is in no-man's land. Given the fact that the gold price is trading just not far from its (USD) all-time high, we interpret this as exceptionally positive.**
- **Seasonality clearly advises caution, restraint, and above all patience. Statistically, the precious metals sector does not enter a favorable phase until the middle or end of July. June, in particular, is traditionally a weak month for gold prices.**
- **The Midas Touch Gold Model™ switched from neutral to bullish on March 10, 2023 and caught an increase of around USD 200 in the past two months. Since May 11th, however, more and more bearish signals have started to appear.**
- **Overall, gold is likely to digest or correct its impressive recovery rally in the next one to three months.**

After our comprehensive macroeconomic and fundamental analysis, we now turn to the technical analysis of the gold price. Last year we wrote in this space:

> *"**The analysis of market structure, sentiment and price patterns leads us to a rather mixed technical assessment.** Since gold's all-time high in August 2020, 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. The resolution of the long-term cup-handle formation is proving to be much tougher and more protracted than expected. **Although sentiment has clouded recently, an extreme bearish washout has not (yet) taken place.**"*[85]

Bottoms are better to watch than to try and catch.
Rebecca "Becky" Quick

This technical assessment proved to be correct. A few days after the publication of the *In Gold We Trust* report 2022, a downward trend set in, which only found its bottom at USD 1,600. The bearish *washout* thus took place. This low prepared a solid foundation for a rally of just under USD 400.

Time is more important than price. When time is up price will reverse.
W. D. Gann

So what is our current technical assessment of the gold price? If we were to vote for a golden rule of technical analysis, *the trend is your friend* would be the top candidate. And the medium-term trend is certainly in favor of gold at the moment. As the next chart shows, the gold price remains above the 50-day and 200-day moving averages.

To determine the longer-term position, we again consult the Coppock indicator, a reliable momentum indicator.[86] A buy signal is triggered when the indicator changes from negative to positive terrain. The Coppock indicator is still on buy but has formed a small divergence with the price. The KST[87], on the other hand, turned impulsively upward in the winter of 2022 and could herald an imminent breakout.

Source: Tradingview, Incrementum AG

The public buys the most at the top and the least at the bottom.
Bob Farrell

The long-term cup-handle formation, which could now soon be resolved, appears 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

[85] "Technical Analysis," *In Gold We Trust* report 2022, p. 364.
[86] 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.
[87] Martin Pring's Know Sure Thing (KST) indicator measures the price momentum of four different price cycles.

of the cup and then extending further in the direction of the breakout area. The **price target of the formation remains at around USD 2,700.**

When all the experts and forecasts agree, something else is going to happen.
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 ups and downs of recent months, price targets have been lowered in the usual procyclical manner. Looking at the forecasts from mid-May 2023 for the end of 2023, a median price of USD 1,936 is expected. The price targets for the end of the following years are: USD 2,000 (2024), USD 1,842 (2025), USD 1,700 (2026) and USD 1,650 (2027). **De facto, the analysts thus expect a sideways movement until 2024 and then a bear market.**

Bloomberg: Analyst consensus for gold: 2023–2027

Consensus	Spot	As Of	2023	2024	2025	2026	2027
Median		05/12/23	1936.00	2000.00	1842.00	1700.00	1650.00
Mean		05/12/23	1939.87	1947.82	1856.43	1712.83	1658.33
High		05/12/23	2200.00	2100.00	2130.00	1927.00	1725.00
Low		05/12/23	1790.00	1720.00	1600.00	1600.00	1600.00
Forward	2007.87	05/16/23	2009.00	2133.71	2213.33	2256.11	2293.86
Diff (Median - Curr)			-73.00	-133.71	-371.33	-556.11	-643.86

Source: Bloomberg

Nothing moves in a straight line is the point. But picking bottoms is best left to the proctologists.
Dave Rosenberg

The picture is similar for silver. At the end of the year, a median price of USD 23 is expected. Subsequently, the price is expected to rise to USD 24 in 2024. However, the consensus is no longer really meaningful, as the number of active coverages on the part of banks has decreased significantly in recent years. **This confirms our hypothesis that silver is as popular in the financial sector as a pork knuckle and a pint of beer are for vegan teetotalers**.

Bloomberg: Analyst consensus for silver: 2023–2027

Consensus	Spot	As Of	2023	2024	2025	2026	2027
Median		05/11/23	23.00	24.00	24.00	23.75	24.00
Mean		05/11/23	23.20	23.84	23.59	23.63	24.00
High		05/11/23	27.00	27.00	26.30	26.00	25.00
Low		05/11/23	20.85	20.00	21.00	21.00	23.00
Forward	23.78	05/16/23	24.06	25.53	26.22	27.09	27.30
Diff (Median - Curr)			-1.06	-1.53	-2.22	-3.34	-3.30

Source: Bloomberg

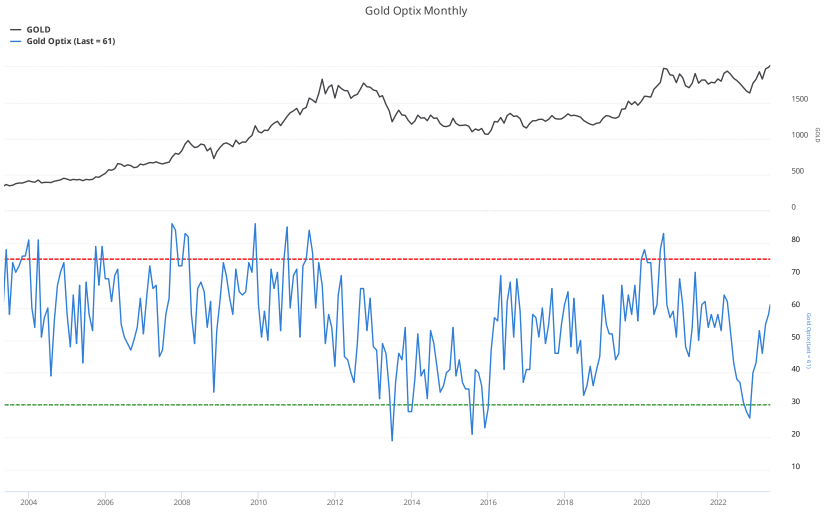
The one who follows the crowd will usually get no further than the crowd. The one who walks alone is likely to find himself in places no one has ever been.
Albert Einstein

One of our favorite sentiment indicators is the Optix Index from Sentimentrader. It tracks the most common sentiment indicators as well as data from the futures and options market. 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).

Be careful when you follow the masses. Sometimes the "m" is silent.
Unknown

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 lower, on the other hand, pessimism is pronounced and the downside risk is limited. Currently, the monthly Optix is at 61 and thus still in neutral territory. Comparing the current level with the last peak in July 2020, a clear positive divergence can be seen. This signals that the gold price certainly still has potential from a sentiment perspective.

Optix indicator and gold price, 2004–2023

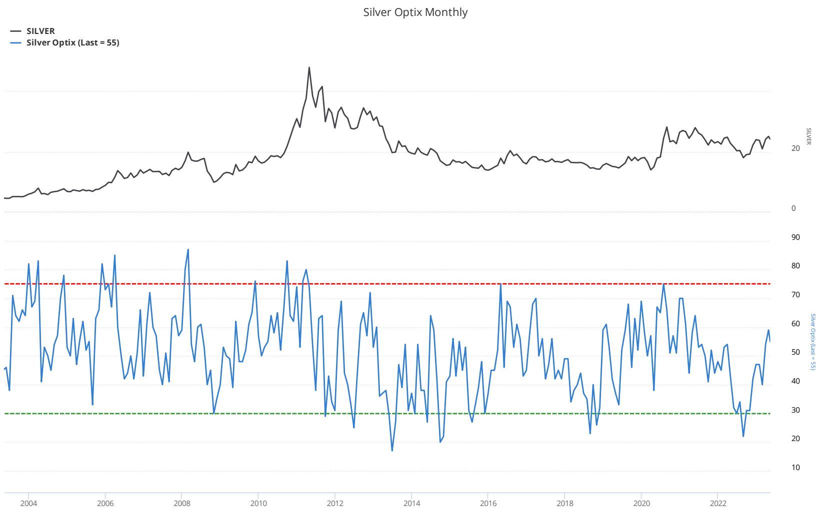


Source: Sentimentrader.com

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 once wrote: "*At Silver, the party doesn't seem to have really started yet, although the guests are slowly arriving.*" More party guests have indeed arrived in the meantime, but others have quickly left the party again in frustration. **The Optix Index for silver is currently trading at 55, i.e. in neutral territory.**

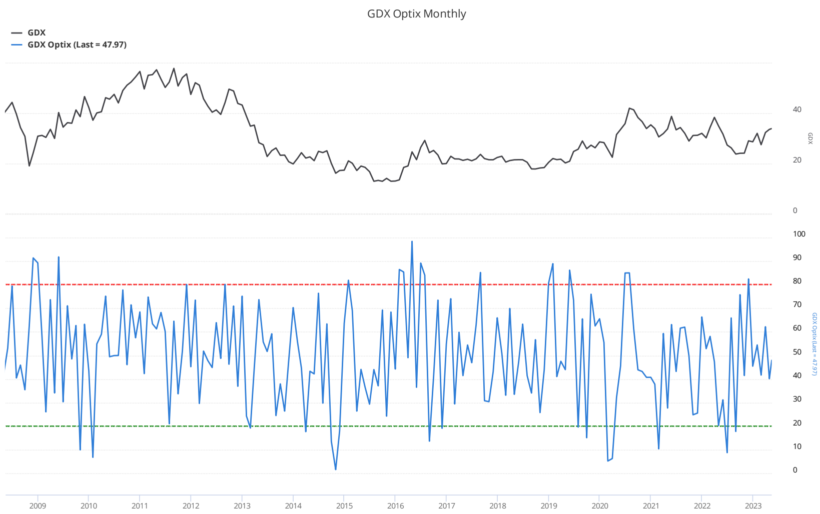
Optix indicator and silver price, 2004-2023



Source: Sentimentrader.com

Finally, if we look at the sentiment among mining investors, we see anything but exuberant euphoria here as well. **The Optix is currently trading at 47 and thus also in neutral territory.**

Optix indicator and GDX, 2008-2023



Source: Sentimentrader.com

Just when you find the key to the market, they change the locks.
Gerald Loeb

This year, we also want to take a brief look at seasonal patterns. The following chart shows the annual development of gold in US pre-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.[88] Thus, from a seasonal perspective, further headwinds should be expected in the coming weeks.

Seasonality of gold in pre-election years

Source: Seasonax.com

Silver also shows a seasonal downtrend until July. Subsequently, an impulsive trend phase sets in until mid-September.

Seasonality of silver in pre-election years

Source: Seasonax.com

[88] The seasonal charts were provided to us by our friends at www.seasonax.com.

The Midas Touch Gold Model™[89]

"The markets are the same now as they were five to ten years ago because they keep changing – just like they did then."

Ed Seykota

Per usual, it's time for an update on the current status of the Midas Touch Gold Model™ as well as a short- to medium-term outlook from Florian Grummes. The Midas Touch Gold Model illuminates the gold market from many different perspectives, with a rational and holistic approach. It convinces with its versatility and its quantitative measurability. While rooted in extensive data, the model excels at distilling a comprehensive in-depth analysis into a succinct and lucid table, ultimately arriving at a decisive and clear conclusion.

Gold in USD (Monthly Chart)

Source: Midas Touch Consulting, Tradingview

Over the past year and a half, we have consistently advised patience and anticipated that the breakout from the massive cup & handle pattern in the gold market would take longer to materialize. After gold failed to surpass its all-time high in March 2022, our Gold Model definitively shifted to a bearish mode by April. However, we did not expect a six-month pullback, with prices ultimately dropping to USD 1,615. But the most aggressive rate hiking cycle in history led to a severe and deep correction across all market sectors, including the gold market, of course. Fortunately, the Midas Touch Gold Model, combined with our technical analysis, kept us mostly on the sidelines, aside from a one-month summer rally.

By mid-October 2022, short-selling and hedging positions among retail investors had skyrocketed to historic highs, creating a dismal sentiment in the markets that hinted at an imminent recovery. Consequently, the clear triple bottom at USD 1,615 marked the turning point for a new uptrend in the gold market.

[89] 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.

In the first step, a swift rebound was accomplished, as gold reached its 200-day moving average as well as the psychologically important level of USD 1,800. Amid a market environment still characterized by fear and skepticism, gold prices then managed to hold above the USD 1,800 mark throughout December, hence setting the stage for the next phase of the recovery rally at the beginning of January 2023. This next wave up propelled gold prices quickly to USD 1,959, bringing them within sight of the magical threshold of USD 2,000. After a rise of 21.22% or USD 243 in just three months, however, bears temporarily resurfaced in February, pushing gold prices mercilessly down to USD 1,804.

One characteristic of successful traders is that they function flawlessly when they are not trading. When the markets calm down and enter a consolidation or correction phase, these traders engage in various activities, such as exchanging ideas with colleagues or conducting research. Traders who struggle to endure inactivity inevitably feel the urge to trade, even when there is often no real reason to do so. For them, the loss of money is less burdensome than boredom.
Dr. Brett Steenbarger

Following the bank run on Silicon Valley Bank and the ensuing banking crisis in the US, gold prices quickly turned around in early March and then sharply surged higher once again, reaching USD 2,009 within a mere three weeks. Since then, gold prices have experienced fluctuations but managed to improve further, reaching as high as USD 2,067. While the spot market has yet to hit an all-time high, the June future achieved a new record high at USD 2,085.

Despite its strong performance, the gold market has gradually lost momentum in recent weeks. The upward movement appears increasingly sluggish, with negative divergences becoming more prominent. It is important to recognize that the rally from USD 1,615 to USD 2,067 (+USD 452 or +27.86%) over the past six months has taken a significant amount of energy, and historically, the months of May, June, and July tend to be relatively weak for gold. Consequently, we have been warning for several weeks about a potential *topping process* in which gold prices could stall out around the USD 2,050 mark, followed by a pullback. Under normal circumstances, this correction would likely lead prices back to the range of USD 1,900 to USD 1,920. It would not be unusual or unwelcome to witness a reunion with the swiftly rising 200-day moving average (currently at USD 1,820) by mid-summer. In the best-case scenario, we may already see a resurgence of buyers outweighing sellers around USD 1,970. In this case though, the correction would primarily be resolved over the course of time and not price, extending until mid-summer.

Alternatively, if the bears make a forceful return, gold prices would likely have to endure a significant decline, too. There are sufficient reasons for a deflationary second half of the year, although these factors are already known and priced in. Furthermore, the number of pessimists continues to clearly outweigh the optimists. Therefore, it would not be surprising if the crash that everyone talks about already occurred in 2022, with the markets being further propelled upwards by the covert implementation of new money-printing measures.

Midas Touch Gold Model™

The Midas Touch Gold Model™ May 13th, 2023

Version 1.3

Gold USD - Monthly Chart	USD 2,011.01	Buy signal 02/28/23, reversal @ USD 1,658.93	Bullish		
Gold USD - Weekly Chart	USD 2,011.01	Buy signal 03/13/23, reversal @ USD 1,915.85	Bullish		
Gold USD - Daily Chart	USD 2,011.01	Buy signal 05/02/23, reversal @ USD 2,002,15	Bullish		
Gold Volatility CBOE Index	17.37	Falling and neutral volatility, no panic buying		Neutral	
Gold CoT-Report	-222,515	Commercial shortposition too high			Bearish
Gold Sentiment	60	Sentiment is neutral		Neutral	
Gold Seasonality	May	Until at least end of June negative seasonal cycle			Bearish
Ratio DowJones/Gold	16.49	Buy signal 01/03/23, reversal @ 17.56; Gold outperforming Dow	Bullish		
Ratio Gold/Silver	83.62	Buy signal 03/27/23, reversal @ 88.49; Silver outperforming gold	Bullish		
Ratio Gold/Oil	28.84	Buy signal 05/01/23, reversal @ 24.29; Gold outperforming oil	Bullish		
Ratio Gold/Commodities (GNX)	3.75	Buy signal 11/07/22, reversal @ 3.48; Gold outperforming commodities	Bullish		
Ratio Bitcoin/Gold	13.34	Sell signal 01/09/23, reversal @ 12.40; Bitcoin outperforming gold			Bearish
SPDR Gold Trust Holdings (GLD)	937.54t	Plus 11.3t during the last two weeks	Bullish		
Gold in $, €, £, ¥	1 out of 4	Gold up against EUR, GBP & JPY, down against USD over one month		Neutral	
Gold in Indian Rupee	INR 165,419	Buy signal 05/03/23, reversal @ INR 163,327	Bullish		
Gold in Chinese Yuan	CNY 13,992	Buy signal 05/03/23, reversal @ CNY 13,747	Bullish		
GDX Goldminers - Daily Chart	USD 33.60	Sell signal 05/11/23, reversal @ USD 36.20			Bearish
GDX Goldminers Sentiment	38.69	Sentiment is neutral		Neutral	
US-Dollar - Daily Chart	USD 102.51	Buy signal 05/12/23, reversal @ USD 105.52; bearish for gold			Bearish
US-Dollar CoT-Report	-12,626	Commercials shortpositions on the US-Dollar rather small		Neutral	
US Real Interest Rate	-1.600%	3-month T-bill yield (5.25%) - change in the CPI (6.85%)	Bullish		

Gold Model is in buy/bullish mode since March 10th, 2023

in gold we trust .report

MIDAS TOUCH CONSULTING

Source: Midas Touch Consulting

The Midas Touch Gold Model™ switched from neutral to bullish on March 10th, 2023. Hence, the model caught an increase of around USD 200 in the past two months in the gold market. However, the situation has significantly deteriorated in the last trading days, with a new sell signal for the GDX Gold Miners ETF and a buy signal for the US dollar. On the daily chart for gold in US dollars, there is not much left until a reversal signal is reached at USD 2,002.15. At that point, the Midas Touch Gold Model™ would also shift to neutral. Silver appears to have already reversed, with a large red daily candle on May 11th, leaving a small double top around the USD 26 mark. However, the gold/silver ratio has not yet switched from bullish to bearish.

Overall, the following conclusions can currently be drawn from the Midas Touch Gold Model™:

- **Both the monthly and the weekly charts still have active buy signals.** In particular, the buy signal on the monthly chart remains strong and would currently only reverse with prices below USD 1,658.93. However, the buy signal on the weekly chart could flip during a multi-week spring correction. Currently, this would occur if gold prices were to reach USD 1,915.85. This threshold increases by approximately USD 15 per week.
- **Seasonality clearly advises caution, restraint, and above all patience.** Statistically, the precious metals sector does not enter a favorable phase until the middle or end of July. June, in particular, is traditionally a weak month for gold prices.
- **Despite the strong upward movement over the past six months, sentiment remains neutral.** There is (still) no euphoria or greed, and the rally has received little attention in the mainstream. These are ideal conditions in the medium term for a sustained breakout above the major resistance zone around USD 2,050 and a multi-year bull market.
- **Since the beginning of the year, gold has clearly outperformed the Dow Jones.** In the big picture, compared to the peak in September 2018, the Dow Jones/gold ratio only reached lower highs in December 2021 and October 2022. A downtrend is slowly but surely taking shape. The next step would be a lower low in the coming year. This means that gold would have to outperform

stocks even more strongly, and the Dow Jones/gold ratio should be heading towards 12:1.

- **Since the buy signal on November 7th, 2022, gold has strongly outperformed all other commodities.** In the coming weeks, a shift in favor within the commodity sector can be expected as part of a correction in the gold market. In particular, the oversold copper price could now take the lead for a while. Subsequently, it is possible that the oil price may take over.
- **The rally of the past six months was not driven by gold ETFs.** For example, the holdings of the largest gold ETF, GLD, only increased by approximately 22 tonnes in the past six and a half months. It is likely that gold ETFs will contribute to additional demand only at higher prices.
- **While gold almost reached a new all-time high, mining stocks (GDX) are trading around 20% below their peak in August 2020.** The Gold Miners ETF already reversed upwards in September 2022, delivering a 68.47% gain and providing a leverage of 2.4 times the gold price. Despite this clear outperformance over the past six and a half months, the performance over the past three years has been disappointing and has clearly lagged behind the gold price. Since May 11th, the Gold Miners ETF (GDX) has triggered a new sell signal. A healthy minimum correction could easily lead the ETF to the 38.2% retracement (to USD 30.62) of the upward movement over the last six months. This would correspond to a correction potential of at least 8%.
- **After a decline of 12.2% within seven months, the US Dollar Index now has some potential for recovery.** With a new buy signal on May 11th, 2023, the greenback could at least recover to its slowly declining 200-day moving average (USD 105.85) in the coming weeks. A slightly stronger US dollar is likely to have a negative impact on the gold price.

Gold in USD (Daily Chart)

Source: Midas Touch Consulting, Tradingview

On its daily chart, the gold price has been getting more and more stuck around the USD 2,050 mark in recent weeks. At the same time, a bearish wedge has formed, while several indicators such as the Stochastic Oscillator have failed to confirm the new price highs (negative divergence). With a weekly closing price of USD 2,010.90, gold has slightly broken out of the wedge to the downside. The wedge formation suggests a correction target around USD 1,825.

Currently, the rapidly rising 200-day moving average (USD 1,821) is also within this range. By mid-July, however, and towards the end of the negative seasonal phase, this important moving average is likely to reach approximately USD 1,900. Ideally, the gold price should test its 200-day moving average before the start of the next wave up. Therefore, along with the 38.2% retracement of the entire recovery rally (from USD 1,615 to USD 2,067), the range between USD 1,900 and USD 1,920 appears to be an ideal target zone for the suspected correction. This would represent the middle ground between a major correction that could disrupt the favorable technical chart pattern and a shallow consolidation primarily over time above USD 1,970, which may not sufficiently cleanse the overheated gold market.

Anticipation is the greatest pleasure.
German proverb

Overall, gold is likely to digest or correct its impressive recovery rally in the next one to three months. The pullback does not necessarily have to be very deep. In the best-case scenario, buyers could emerge significantly around USD 1,970. However, it would be better if the pullback ran towards the range of USD 1,900 to USD 1,920 and closed the open mini gap in gold futures. Subsequently, the breakout above the three-year resistance zone around USD 2,050 to USD 2,075 would be on the agenda, triggering the massive cup and handle formation to the upside. This pattern has accumulated a tremendous amount of energy in the gold market since 2011, which could potentially drive gold prices beyond USD 2,500 in the fourth quarter of 2023. For this feat to be accomplished, it is crucial for the gold price to take a healthy breather in the coming weeks via a significant pullback. If this fails, the breakout above USD 2,075 is likely to be less exhilarating.

Conclusion

Remember – if I am right at the wrong time, I am wrong.
Matt Kenah

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 lets us come to a slightly positive technical assessment. Since the all-time high in August 2020, a speculative shakeout has taken place, which culminated in a final wash-out in the fall of 2022. The Coppock indicator remains at buy, but has formed a small divergence. The resolution of the long-term cup-handle formation is proving to be much tougher and more protracted than expected.

The sentiment is in no-man's land. Given the fact that the gold price is trading just not far from its (USD) all-time high, we interpret this as extremely positive. The combination of continued relatively low interest in gold and silver on the part of investors, and the lack of price fantasy on the part of analysts is, in our opinion, a good foundation for a breakout from the multi-year cup-handle formation. **However, it seems quite possible that this breakout could still take some time as the short-term technical setup has weakened over the course of the last couple of days.**

TUDOR GOLD

Why Invest in TUDOR GOLD Corp.?

Treaty Creek's Goldstorm Deposit is one of the largest gold discoveries in the past 30 years!

Updated Mineral Resource Estimate (MRE) in March 2023:

- **23.4 Moz @ 1.13 g/t AuEQ** (Indicated) & **7.4 Moz @ 0.98 g/t AuEQ** (Inferred) (0.5 g/t AuEQ cut-off)
- **Substantial increase in ore grades (by 52.7 %) in comparison to 2021 MRE**

Quality of Ounces Increasing:

- **15.18 Moz @ 1.48 g/t AuEQ** (Indicated) (1.0 g/t AuEQ cut-off)

Mineral Diversity:

- Goldstorm hosts significant amounts of copper (+ 3 billion lbs) & silver (+150 million oz)

Significant Exploration & Investment Upside:

- Goldstorm remains open in all directions with huge geological potential for similar size discovery at Perfectstorm Zone

Excellent Jurisdiction and Infrastructure:

- Mining friendly political environment with substantial roads, power grid and seaports

Management Success:

- Proven track record of past discoveries and developing successful producing mines
- CEO **Ken Konkin,** (P.Geo.) is an award-winning geologist and was instrumental in the discovery of the Valley of the Kings deposit at the Brucejack Mine (Newcrest Mining).

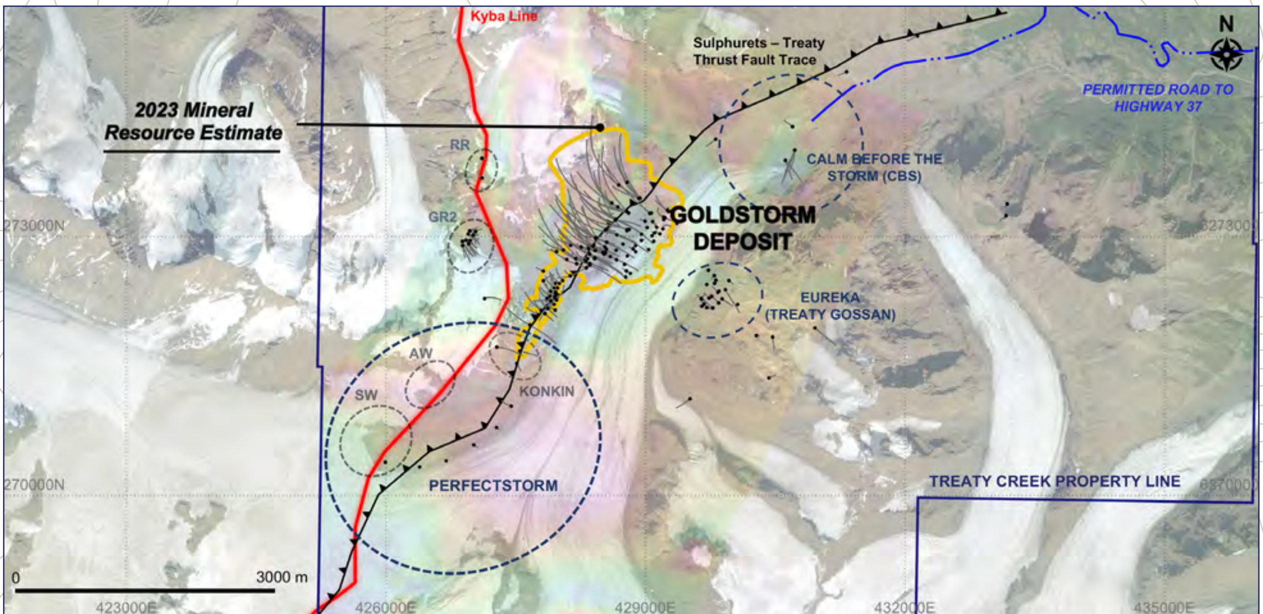
Strong Corporate Structure:

- Equity ownership is 44.8% insider held which includes Tudor Holdings and Eric Sprott

Local Support with First Nations:

- Signed Agreement with Tahltan Nation and support from local communities

TREATY CREEK – DEVELOPING THE GOLDEN TRIANGLE'S NEWEST GOLD-COPPER PORPHYRY SYSTEM



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Quo Vadis, Aurum?

Bad dreamer, what's your name?
Looks like we're ridin' on the same train
Looks as through there'll be more pain
There's gonna be a showdown.

Electric Light Orchestra, "Showdown"

- **The time factor is significantly underestimated in terms of the impact of interest rate hikes. Given the rapid pace of monetary tightening, we expect a recession in the next 12 months.**
- **We are approaching a decision point in monetary policy. Due to the increasing fragility of banks, the real economy and financial markets, there will be a monetary policy showdown in connection with the expected downturn.**
- **The geopolitical showdown around the reshuffling of the world order is already in full swing. The structurally higher demand for gold from central banks will be a key driver of the gold bull market.**
- **Even though inflation rates in the US and the euro zone have fallen recently, we assume that another wave of inflation will follow and that the "Stagflation 2.0" environment will continue to accompany us.**
- **Gold price outlook: Based on the *Incrementum Recession Phase Model*, in the event of a recession, we would expect gold prices at USD 2,300–2,400 over the next 12 months. We continue to adhere to our decade price target of USD 4,800.**

The Era of Multiple Showdowns

This is a bad time for optimists
They must be pretty lonely
So let's give them a little support
Who wants to be alone?
Silbermond

Stubbornly high inflation numbers, rising interest rates, recession warnings, a banking crisis with war going on simultaneously in Europe, tectonic shifts in geopolitical alliances, and intensified de-dollarization efforts. We are not only in a time of multiple crises, but also multiple showdowns. The Chinese saying "*May you live in interesting times*" has an uneasy connotation and is quite possibly seen as a curse in China.

However, we do not want to see the circumstance of interesting times as a curse but rather as a challenge, as a task that now needs to be mastered. To this end, we should realize that while times of uncertainty and instability are challenging, they also represent an opportunity to sharpen our historical awareness and prepare for future developments. **So what factors are particularly important for investors to consider in the current period of uncertainty and instability?**

The Credibility of Central Banks Is Eroding

Credit money is based on trust, and in competitive markets, trust itself becomes a scarce commodity.
David Graeber

Confidence in central banks has undoubtedly taken a hit following their colossal misjudgment of inflation trends. Last year, we took a trip into the world of ornithology. We wrote:

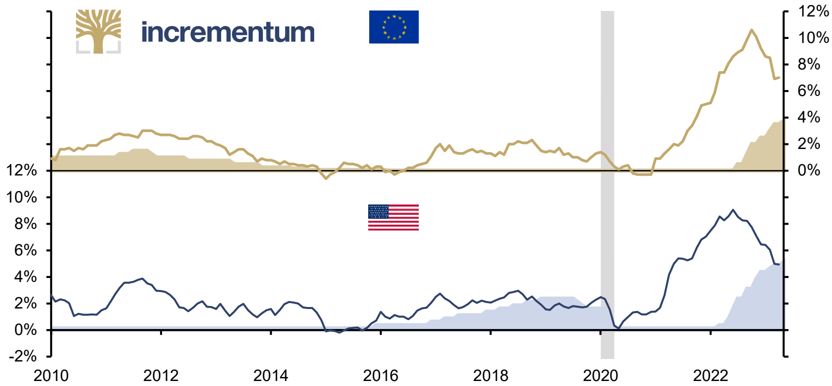
> *"While central bankers in the US, the UK, and other countries have been late in getting the cycle of interest rate hikes underway, ECB President Christine Lagarde and many other representatives of the Governing Council seem to have no idea at all what a monetary policy hawk is. An ornithological-economic tutorial seems in order, because there are now fewer hawks in the ECB than chamois in the Netherlands. With the supposed gentleness of the dove, i.e. the greatest possible monetary policy passivity, the ECB hopes the inflation problem will disappear of its own accord. However, this view is not gentle or naïve, but rather incendiary."*[90]

Central planning is as futile as trying to strap on wings and fly like a bird – and potentially as calamitous.
Donald Boudreaux

One year later, it can be said that the ornithological-economic tutorial we recommended was obviously urgently needed. While the Federal Reserve tackled the interest rate hike cycle late but ultimately consistently, the ECB reacted even later and far less spiritedly. In the US, the last wave of inflation peaked at 9.1% in June 2022, while in the euro zone it peaked at 10.6% in October 2022. The cycle of interest rate hikes has continued since then, rising to 5.25% in the US and 3.75% in the euro zone.

-
90 "Stagflation 2.0," *In Gold We Trust* report 2022, p. 372

Key Interest Rate, and CPI/HICP, USA (lhs), and Euro Area (rhs), 01/2010-05/2023



Source: Reuters Eikon, Incrementum AG

The hope of a soft landing or mild recession is a consensus delusion sucking investors into the over-crowded investments of a past era.
Tavi Costa

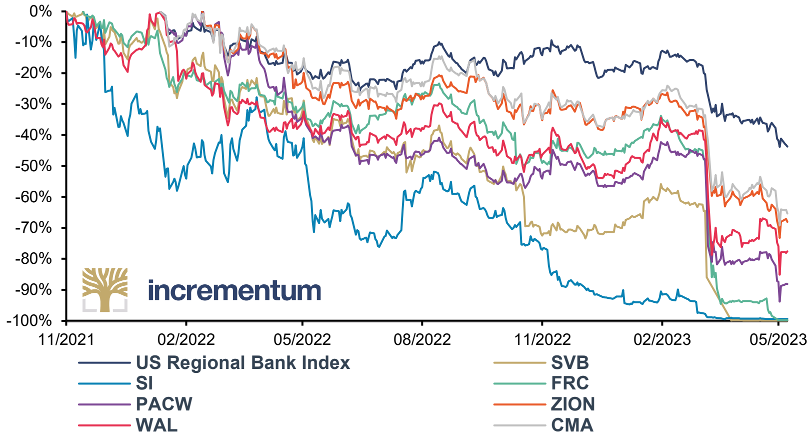
Are central banks now really in the process of turning their dove's nest into a hawk's aerie? We will only get the answer in the coming months, when the monetary policy showdown takes place. The Federal Reserve in particular has already been under pressure to act in the wake of the turmoil surrounding the three major bank failures and has reacted quickly. The recent expansion of the central bank's balance sheet by USD 400bn is probably a tangible indication that, in case of doubt, it attaches higher priority to the stability of the banking sector and thus of the financial markets than to price stability. The bank failures that have occurred so far have not yet led to a system-threatening cataclysm. **However, we firmly believe that a worsening of the crisis will also lead to an official reversal of the restrictive monetary policy.**

The banking system is sound and resilient.
Jerome Powell

I don't see a financial crisis occurring in our lifetimes.
Janet Yellen

Recent events suggest that the hitherto tentative recovery in the reputation of central banks is already threatening to collapse again. On May 4, for example, Jerome Powell was still affirming that the US banking system was "*stable and resilient*". But already on May 5, the share prices of some regional US banks collapsed again, in some cases even by half. Should further serious problems arise in the banking sector in the coming weeks, this could quickly lead to a calamitous loss of credibility, despite the central bank's assurances to the contrary.

US Regional Bank Index and Various Banks from 2021 Highs, 11/2021-05/2023



Source: Reuters Eikon, Incrementum AG

The Underestimated Factor of Time

Worry is interest paid on trouble before it is due.
William Ralph Inge

As we detailed in last year's *In Gold We Trust* report, the originally stated monetary policy goal of managing monetary tightening and pushing inflation below 2% without triggering a recession, is unrealistic. **We believe that an abundance of economic malaise is being revealed before us as a result of the full-throttle monetary policy stance.** Monetarily induced booms always mask a multitude of financial sins and encourage herd behavior, false risk awareness, recklessness, and a *this time is different* mentality.

It wasn't raining when Noah built the ark.
Warren Buffett

Warren Buffett compared interest rates to gravity: Just as the Earth's gravitational pull affects mass, interest rates affect valuations. The more interest rates fall, the more valuations rise due to the discounting effect, to astronomical heights in the case of low and zero interest rates. When interest rates start to rise again, valuations come back down to earth. In view of the years-long boom in valuations during the many, many years of zero and low interest rates, this return to "normal" interest rate levels is tantamount to landing with a brutal thud on the hard ground of reality for many asset classes.

Coffee: *You can do this.*
Wine: *You don't have to do this.*
Tequila: *You just did that.*

In our opinion, the time factor is completely underestimated. First, it takes some time for the expansion of the money supply to unfold in the real economy and drive up inflation rates. **We once jokingly called this time lag the "Tequila Theory of Money".** A few shots of tequila in the evening undoubtedly help to lift the spirits at a party. It's not until the next day that the inevitable consequences make themselves felt in the form of nausea, a stinging headache, and potential amorous missteps.

You can avoid reality, but you cannot avoid the consequences of avoiding reality.
Ayn Rand

In 2022, the price dams began to burst, and after a few months of appeasement rhetoric about the supposedly *temporary* nature of inflation, panic broke out among central banks. In the US in particular, the emergency monetary policy brake was pulled. However, pulling hard on this brake – unlike applying a mechanical emergency brake – does not trigger any immediate consequences.

Now we have come full circle, and once again we have to warn about the lag effects, but this time in the opposite direction. The effects of QT and higher interest rates will be felt more clearly, day by day.

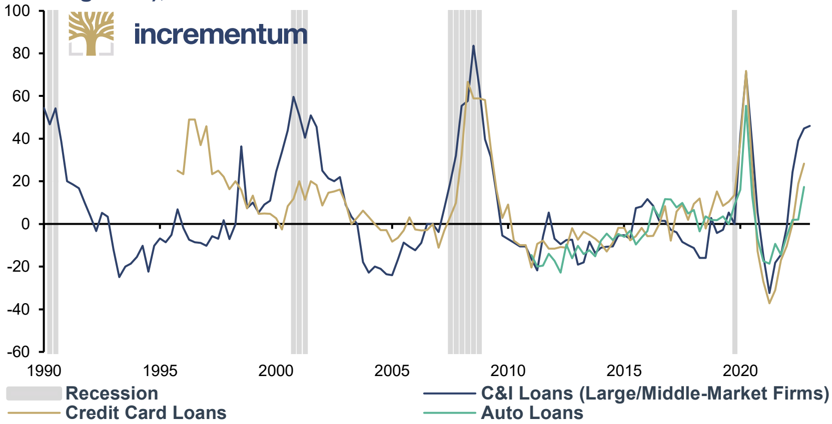
In the chronological sequence, monetary policy runs ahead of the economy and the latter ahead of inflation. So if the central banks now tighten monetary policy because of the sharp rise in inflation, this is the equivalent of a chauffeur who only looks in the rearview mirror when driving forward.
Felix Zulauf

To illustrate the time lag of monetary policy actions, it is advisable for investors, especially the *pessimistic bulls*, to look at the recent past. In September 2007, then-Federal Reserve Chairman Ben Bernanke felt compelled to cut interest rates for the first time since June 2003, despite inflation exceeding 2%. By that time, the US housing market had already declined sharply. Although Wall Street initially went into a frenzy of joy, in 2008/2009 the US and with it the global economy slid into the biggest crisis since the Great Depression. The initial interest rate cuts completely fizzled out. **The US CPI fell from 5.6% in July 2008 to -2% a year later.** Stock markets hit their lows on March 9, 2009, only 19 months after the first rate cut and five months after the launch of QE1. **So despite numerous headache pills, tequila continued to play havoc for a long time**.

If you can't spot the sucker in the first half hour at the table, then you are the sucker.
Mike McDermott

This example illustrates the considerable lag effects of monetary policy. It will take several more quarters before the consequences of the interest rate hikes of the past 14 months are fully apparent. The now-tighter lending conditions for businesses and consumers lead us to suspect that a disinflationary recession is becoming more likely by the day.

Net Percentage of US Banks Tightening Standards (Various Categories), Q2/1990-Q1/2023



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

If Jerome Powell is the new Paul Volcker, then Danny de Vito is the new Brad Pitt.
Ronnie Stöferle, Macrovoices Interview

The crucial questions now are: Will the monetary tightening process reduce inflation far enough for central banks to save face and then loosen the reins again? And can the monetary policy withdrawal course be completed without causing too much damage to the economy and the financial markets? This will probably require iron discipline and political independence at the level of central bank leadership. Even if Jerome Powell wants to regain credibility and trust by alluding to Paul Volcker, we think the Volcker vs. Powell comparison is inappropriate. **The main reason? The significantly worsened debt situation.**

The Systemic Debt Problem

Let us not seek the Republican answer or the Democratic answer, but the right answer. Let us not seek to fix the blame for the past. Let us accept our own responsibility for the future.
John F. Kennedy

Both at the government and at the household and corporate level, debt is close to its peaks and many times higher than during Paul Volcker's time. Accordingly, systemic interest rate sensitivity is also high today. The debt ratios by sector show the striking difference between today's picture and the situation when Volcker was fighting inflation.

Debt by Sector, USA, as % of GDP

Date	Government	Non-Financial Corporations	Private Households
1970	35.7%	47.0%	44.0%
1982	35.2%	53.1%	47.9%
Q3/2022	120.2%	78.8%	75.2%

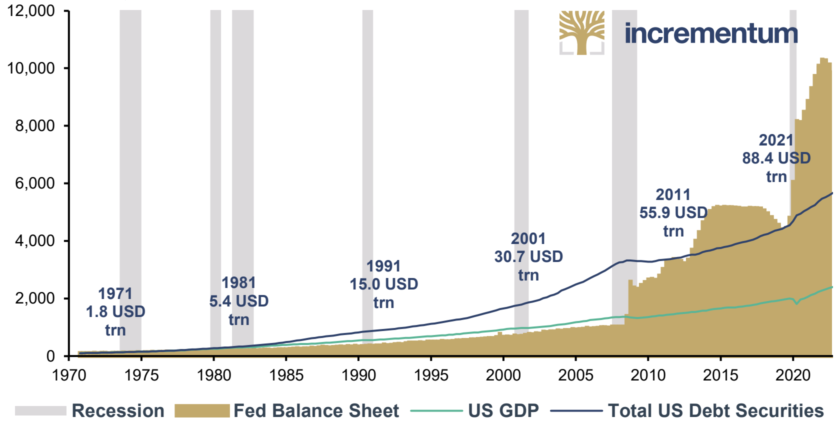
Source: BIS, Incrementum AG

While the commitment to *sustainability* is omnipresent in all areas of our lives, the *sustainability of today's monetary order* is de facto not questioned at all. Banks and asset managers like to adorn themselves and the names of their investment products with fashionable terms such as *ESG* or *sustainability*, but seem to be completely ignorant of the ecological and social implications of the current monetary system.

Players lose a typical game of Tetris when they can no longer keep up with the increasing speed, and the Tetriminos stack up to the top of the playing field. This is commonly referred to as topping out.
Wikipedia entry about "Tetris"

The unsustainability of debt-induced growth is impressively demonstrated by the following chart. Since 1971, total credit market debt – the broadest aggregate of debt in the US – has increased by a factor of 60, total assets of the Federal Reserve by a factor of 100, and GDP by a factor of only 24. In each decade, the volume of credit has roughly doubled over the past 50 years. A watershed occurred in 2009. For the first time, a decline in total debt was recorded in the course of the financial crisis, which was countered by the Federal Reserve with a massive inflation of the base money supply in the form of QE.

Fed Balance Sheet, US GDP, and Total US Debt Securities, 100 = Q4/1970, Q4/1970-Q4/2022



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

Too much money ain't enough money.
Lil Wayne

This impressive illustration of the exponential growth of debt and money supply shows two things: on the one hand, the systemic unsustainability of the monetary system and, on the other hand, the impossibility of not leaving economic skid marks by a cold withdrawal of the drug credit.

There is nothing more deceptive than an obvious fact.
Sir Arthur Conan Doyle

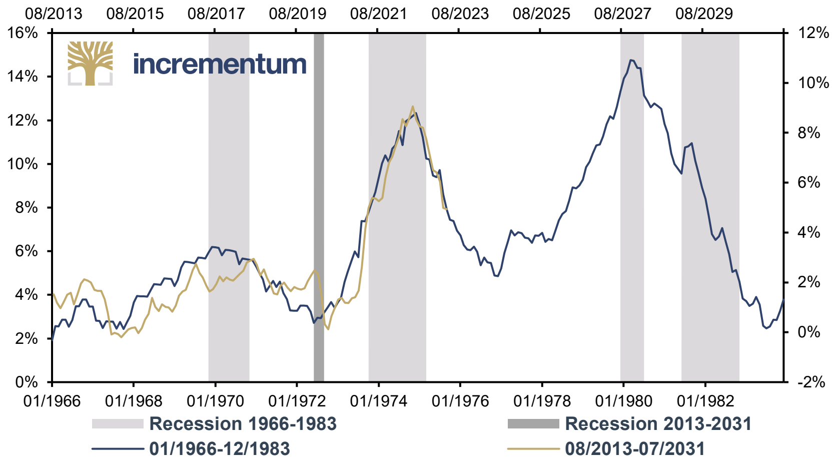
The exorbitant level of debt is ultimately the main reason why the pressure on central banks not to raise interest rates further, or even to lower them again soon, is increasing with each passing day. **It can be assumed that in the real economy, in society, and ultimately also politically, the calls for looser credit and QE are getting louder and louder.** Whether the trigger for the next measures will be the stumbling real estate market, the troubled banking system, or rising unemployment is ultimately secondary.

Further Inflation Wave(s) Ahead?!

Waves are not measured in feet or inches, they are measured in increments of fear.
Buzzy Trent

As we already explained in detail last year, we expect inflation to occur in waves. As the past has shown, the volatility of inflation also increases in an environment of elevated inflation rates. Comparing the current wave of inflation with those of the 1970s is interesting in this context, although the scaling is not the same. What is remarkable is that this comparison, which we already made in exactly this form last year, is still surprisingly apt 12 months later.

US CPI, yoy, 01/1966–12/1983 (lhs), and 08/2013–07/2031 (rhs)



Source: Andreas Steno, Reuters Eikon, Incrementum AG

Over the coming decade, the market will continually underprice inflation risk. Those willing to own it will be rewarded.
Kevin Muir

We think the course of inflation in the 1970s provides a good indication of the future. Against the background of the problems described above, we still see predominantly disinflationary trends in the months ahead. However, this does not mean that the danger of inflation has been banished. On the contrary, **a second wave of inflation will become all the more likely the sooner the restrictive monetary policy has to be abandoned.** Moreover, there are a number of structural reasons for high inflation rates and high inflation volatility in the medium to long term. **So what are the reasons for high inflationary pressure in the longer term**?

On the demand side, the following reasons can be cited:

- Chronic budget deficits and increasing fiscal dominance
- Energy price mitigation programs
- Energy transition, decarbonization
- Rearmament and war economy

On the supply side, the following inflationary trends can be identified:

- Rising trade barriers, environmentally as well as (geo-)politically motivated
- Sanctions from unpleasant trading partners
- The trend toward nationalization of commodity producers
- Nearshoring of supply chains at the expense of efficiency
- Change of strategy in China: reduced dependence on exports
- Demographic change: working population (baby boomers) declining throughout the OECD as well as in China.

Monetary History Is World History

If there is trust, trade works. If trust is gone, it doesn't.
Dale Copeland

The current phase of the monetary policy showdown is accompanied by many uncertainties. However, the general degree of complexity is further increased by geopolitical dynamics and uncertainties. One intersection of (geo)economics and (geo)politics is particularly evident in the de-dollarization we have been analyzing for years. In recent months, the BRICS countries have further intensified their efforts to reduce their dependence on the US dollar.

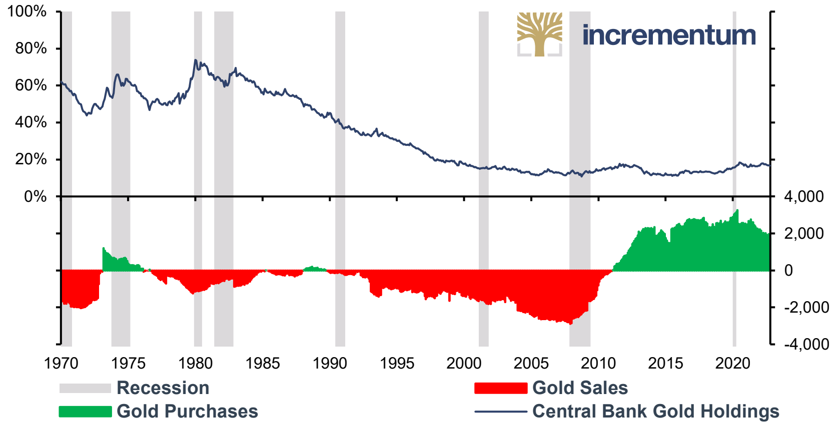
I'm of the view that the US has around 20 years to figure things out before a more sustained reserve currency threat from the RMB materializes, particularly since China has debt issues of its own.
Michael Cembalest

Paraphrasing Mark Twain, however, the obituaries for the US dollar are still premature, because currencies are network assets, and the US dollar, as the No. 1 global currency, enjoys all the advantages of a network asset. Louis-Vincent Gave compares the US dollar to Microsoft Windows. Even though Windows crashes from time to time and has numerous flaws, it is by far the most widely used operating system. A new operating system would not only have to be better but would also have to overcome the disadvantage of not being a network good to begin with. While many similar products can coexist in normal consumer goods, network goods tend to be a natural monopoly. Sometimes there are other competing products such as Mac OS or Linux, but these tend to have a shadowy existence in the overall picture and their use only brings advantages in certain networks. In these sub-segments, however, they are the undisputed top dog. A currency is a classic network good; but law, language, messaging services such as WhatsApp, social media platforms, and ultimately cryptocurrencies are also network goods.

Yesterday is history, tomorrow is a mystery, and today is a gift… what's why they call it the present.
Master Oogway

Gold is also a network good, perhaps even the ultimate monetary network good. In a fragmenting world, gold could be the monetary intermediary that prevents even greater economic disintegration. After all, gold is supranational, neutral, and without counterparty risk. Gold itself could be used in international trade, or in currencies (partially) backed by gold, with tokenized solutions playing a role here. This idea has already been floated by the BRICS. The high demand for gold by central banks suggests that gold is regaining importance in this time of multiple crises.

Central Bank Gold Holdings (lhs), as a % of Foreign Reserves, and 5 Year Rolling Gold Purchases (rhs), in moz, 01/1970-10/2022



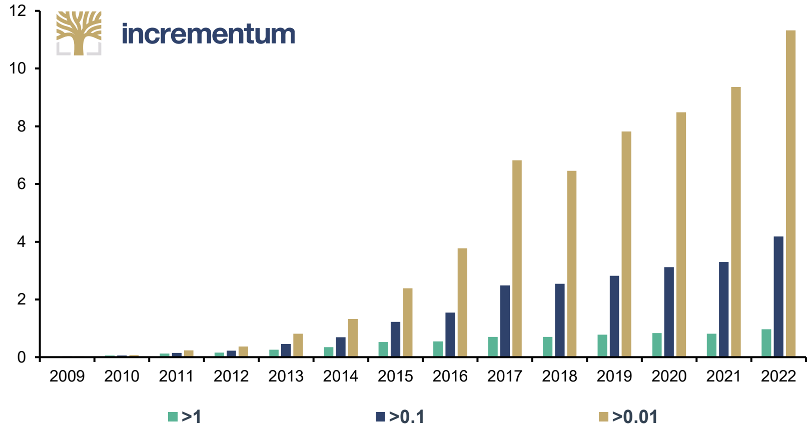
Source: Crescat Capital, Reuters Eikon, Incrementum AG

Future Prospects: Money, Gold, and Bitcoin

Time forks perpetually toward innumerable futures.
Jorge Luis Borges

Knowledge of monetary history is essential when considering the role of money in times of change. In addition to awareness of the past, however, we also want to attentively examine recent technological evolutions. In 2015, we first looked at Bitcoin as part of the *In Gold We Trust* report.[91] Digital stores of value, especially Bitcoin, may change the way we think about money and store of value.

Number of Bitcoin Addresses Holding at Least X Amount, in mn, 2009-2022



Source: Bitcoin Magazine Pro, Glassnode, Incrementum AG

In the end, there can be only one.
Connor MacLeod
Highlander

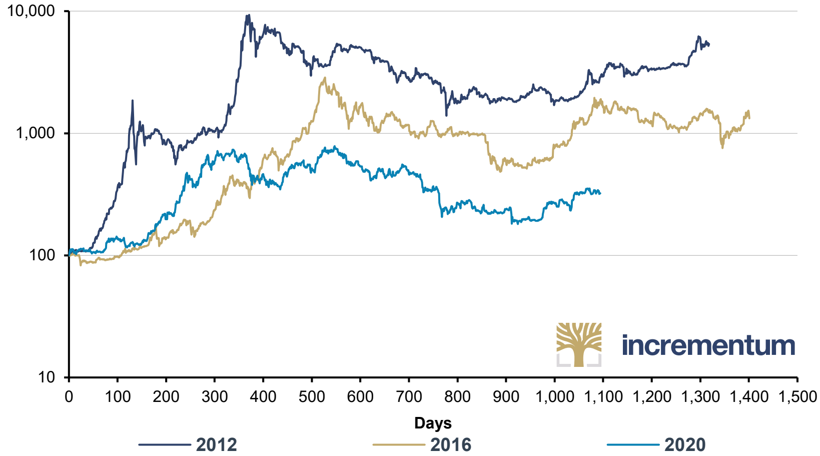
Bitcoin's network effect is clearly visible through the increasing number of users and wallets. As Bitcoin becomes more widespread and adopted, it becomes more attractive and increases its utility. Each new active user and wallet strengthens the network by increasing liquidity. This positive feedback effect strengthens Bitcoin's position as the leading cryptocurrency and supports its potential as a money of the future.

[91] *See* "Past, Present, and Future of the Monetary Order," *In Gold We Trust* report 2015

This is why in a free market, whatever assumes a monetary role will have a reliably high stock-to-flow ratio: the new supply of the money is small compared to the overall existing supply.
Saifedean Ammous

An essential prerequisite for the increasing attractiveness of Bitcoin is its absolute scarcity due to the mathematically fixed upper limit of the supply to 21 million units. Currently, the number of Bitcoins mined is still increasing at about 1.6% p.a. – similarly slowly as the amount of gold mined annually. However, Bitcoin's "inflation rate" halves at four-year intervals. Thus, after the next halving in April 2024, Bitcoin's inflation rate will be lower than that of gold. In past cycles, the price of Bitcoin has invariably risen particularly strongly in the months before and after halving.

Bitcoin Performance after Halvings, 100 = Halving (log), 11/2012-05/2023



Source: Reuters Eikon, Incrementum AG

I'm a bit of a dinosaur, but I have warmed up to the fact that Bitcoin could be an asset class that has a lot of attraction as a store of value.
Stanley Druckenmiller

An intriguing question arises in the context of the geopolitical showdown: Can Bitcoin emerge as a winner from the current re-sorting of the world (dis)order? Despite the current de-globalization trends, it is inconceivable that trade between the *rival blocks* will completely collapse. Against the backdrop of growing geopolitical tensions, certain advantages of a decentralized cryptocurrency like Bitcoin seem obvious. Through its independence from government control and its cross-border transaction capability, Bitcoin would indeed offer an alternative to traditional currencies. We do not see such widespread adoption – aka "*hyperbitcoinization*" – at the nation-state level immediately. In the long term, however, such a breakthrough in the acceptance of Bitcoin cannot be ruled out and would probably cause an enormous stir – also with regard to the price.

The Renaissance of Commodities?

The shift to net zero will require more mining, not less.
PwC

The sufficient availability of commodities was long taken for granted. Price increases and supply bottlenecks have brought a possible shortage of resources back into the public consciousness. On the one hand, the topic is relevant in connection with the energy transition, whose political prioritization raises the question of the availability of needed raw materials. On the other hand, there is burgeoning resource nationalism. A good example of the paradigm shift in the importance of raw materials is the automotive manufacturers. They are increasingly making direct investments in mine operators or strategic supply agreements in order to ensure secure access to raw materials.

We may be in the recession camp, but that doesn't mean we are bearish on everything. Wide swaths of the commodity sector are going into the demand downturn with extremely supportive (as in, inelastic) supply curves and a secular shift in consumption stemming from the global transition to the "green economy".
Dave Rosenberg

As we stated in our chapter about the capex situation,[92] the lack of investment in the past is an obstacle on the way towards better availability, greater independence and, above all, lower prices of raw materials. Copper is an excellent example. The size of the gap between supply and demand is illustrated by some of the discussion papers at the April 2023 "World Copper Conference", presented in the *Wall Street Journal* under the title "Copper Shortage Threatens Green Transition".

According to a study by McKinsey, copper demand will rise to 36mn tons by 2031. Under extremely optimistic assumptions, production could be expanded from today's 21.8mn to 30mn tons. Even under the most favorable conditions, however, the deficit would be substantial, at 6.5mn tons. **To achieve the net-zero emissions goal, the world would need 54% additional copper by 2030, according to Goldman Sachs.** "Green" applications of copper still accounted for only 4% of copper consumption in 2020, but this is expected to rise to 17% by 2030.

According to Guy Wolf, the price of copper would have to nearly double to USD 15,000 to provide an incentive to develop new copper deposits. This shows that the budgeted funds for the energy turnaround are clearly set too low. Moreover, in our opinion, the situation with copper is not an exception but the rule. In some cases even more extreme supply deficits are to be expected, for instance for lithium, but also for nickel and silver.

There's no way we can supply the amount of copper in the next 10 years to drive the energy transition and carbon zero. It's not going to happen. There's just not enough copper deposits being found or developed.
Doug Kirwin

The calculations of the "World Energy Transitions Outlook 2023" by the International Renewable Energy Agency (IRENA) also show that political will is likely to fail in the face of reality. According to this study, the cumulative investment volume required to achieve the 1.5°C target by 2050 amounts to USD 150 tr. Even if we consider these amounts to be exaggerated and unaffordable, it confirms a statement made by our friend Marko Papic. He speaks in this context of an "*absolute orgy of industrial metal capex*". **We thus expect a – state-financed – capex renaissance to force the energy turnaround**.

A recently published study by Cornell University shows that not only does the world have a structural shortage of the raw materials needed for the energy transition, but also that many significant deposits are located in geopolitically unstable countries such as Chile, South Africa, Russia, the Congo, or China, which represents a further risk factor with the potential to increase prices. The West's attempt to become more independent of countries that do not share its values through the energy transition is therefore unlikely to be crowned with success.

[92] *See* chapter "Capex Come Back: A Raging Bull Market for Commodities Beckons" in this *In Gold We Trust* report.

Number one, cash is king... number two, communicate... number three, buy or bury the competition.
Jack Welch

In addition, the processing and refining of green metals is also far more concentrated in China. This means that the geopolitical risks for the supply of industrial metals may be even greater than for the supply of fossil fuels. The West would therefore still need to invest in processing outside China if the current geopolitical rivalry between Washington – and the West more broadly – and Beijing continues. For all the justified fears of a less peaceful future, rivalry between states and blocs has historically often led to leaps in technological innovation. **Thus, one result of the current polarization could be technological breakthroughs that make raw materials cheaper in the long term and open up more resource-efficient growth opportunities.**

Best of *In Gold We Trust* Report 2023

Other key findings from this year's *In Gold We Trust* report, "Showdown," include the following:

- **Inflation:** Central bankers fear a repeat of history as happened under Arthur Burns in the 1970s. Our baseline scenario points to structurally higher inflation with higher volatility in inflation rates. The chapter includes extensive analysis that looks in depth at fundamentals as well as historical and potential future waves of inflation.

- **Debt:** Behind the veil of sustainability discourse lies an underestimated danger: growing government debt. In this chapter, we uncover the alarming implications of the Covid-19 pandemic, analyze the underestimated implications of low interest rates, and shed light on the underestimated link to sustainable economic development. In particular, we question the solvency situation with regard to the zero interest rate trap we have highlighted many times in recent years.

- **De-dollarization:** Already last year, we emphatically pointed out that the freezing of Russian currency reserves in 2022 will probably go down in international monetary history as a historic moment. Europe has clearly sided with the US on this. Meanwhile, Saudi Arabia is flirting intensively with the BRICS countries, which are seeking a multipolar currency system with increasing intensity. The question remains: How will the US respond to these challenges and how will the US dollar fare in this evolving geopolitical context?

- **Gold flows:** China, like India, has imported a huge amount of gold since the early 2000s; and in China's case this has been despite China also being the world's largest gold mining producer. Together, India and China have officially imported somewhere in the region of 34,000–36,000 tonnes of gold over the last 20 years. And if Jan Nieuwenhuijs' thesis is correct, China's official gold reserves could be up to twice as high as reported. Together, China and India have gone from representing a combined 28.7% of consumer gold demand in 2000, to now driving nearly half (48.4%) of global consumer demand in 2022, with a combined 1,600 tonnes of demand last year.

- **Bitcoin vs. Gold:** Bitcoin has been the catalyst for a new wave of interest in sound money, giving the movement a new generation of motivated advocates of a denationalized monetary system. Nevertheless, there is often harsh intellectual trench warfare between the *goldbugs* and the *bitcoiners*. In the chapter, we elaborate on how the respective views differ and which theoretical concepts, if any, are misunderstood by both sides.

- **Silver:** The combination of a shrinking silver supply and strong industrial demand provides a solid foundation for rising silver prices. The energy transition is driving innovation in the solar industry, increasing the use of silver in technologies such as TOPCON and HJT. Price trends show that when gold rises, silver tends to follow, so gold prices will be critical to silver's fate in 2023. Our analysis shows that silver can benefit from reflationary dynamics that typically occur at the end of a recession.

- **Mining stocks:** The value proposition of mining stocks continues to improve, while the market still largely ignores their profitability. With a stable gold price in 2023, miners can continue to generate high margins despite rising costs. Producer cash flows are expected to lead to increased M&A activity, benefiting especially junior producers, developers and explorers in stable regions.

- **Capex cycle:** Although commodity prices have increased significantly in 2021 and 2022, this has not yet led to a significant increase in capital expenditure (capex). The commodity sector has been struggling with various barriers to investment for over a decade. The return of investment is initially expected in the oil and gas sector. Given tight supply and historically low commodity valuations, the expected return of investment will mark the beginning of a new commodity supercycle.

- **ESG:** As a result of the politically desired implementation of *net zero*, the environmental component has dominated ESG activities in recent years. To redress the balance, we are focusing our analysis this year mainly on the social aspect of ESG. New Responsible Gold certifications are helping to accelerate sustainability efforts. The ability to turn these challenges into opportunities to strengthen social engagement will be critical to companies' ESG success.

- **Technical analysis:** Gold prices have been *flirting* with a new all-time USD high for a while now. While long-term indicators such as the Coppock indicator remain clearly bullish, shorter-term models such as the Midas Touch Gold Model™ or even the seasonal patterns currently tend to argue for a more cautious outlook.

Quo Vadis, Aurum?

A mania first carries out those that bet against it and then those that bet with it.
Jim Rogers

Has the gold price already reached its ceiling? The last great inflation-induced bull market found the media touting the bubble myth of gold. The German weekly magazine *Der Spiegel* wrote at the peak of the bull market in 1980, "*This is no longer a bull market in the usual sense, but hysteria, panic, a frenzy*". *Le Monde Diplomatique* spoke of "*gold fever and the disease of capitalism*," while the *Financial Times* thought it saw the revival of the "*myth*" of gold.

But now back to the present: A comparison of gold demand from institutional as well as private investors shows that gold is still a guest at a discreet private party and is by far not yet dancing at the big summer festivals like *Burning Man* in the Nevada desert, the *Donauinselfest* in Vienna, or the *Montreal Jazz Festival*.

Market Share of Gold ETFs, as % of Total ETF Market Measured by AUM, 01/2006-04/2023

Source: Topdown Charts, Incrementum AG

The end to the hiking cycle will be critical for the yellow metal.
BofA

Based on the situation we have described in detail, we expect an increasing flight into real assets, in particular gold and commodities, especially with the expected uncovering of the central bank bluff. Looking at the next chart, we can see that yields on two-year US bonds exploded from 0.11% in mid-2021 to almost 5% at their peak. Most recently, yields at the short end came under significant pressure again. However, from our point of view the bond market is increasingly confirming that the tightening cycle is nearing its end and that the Federal Reserve will have to cut rates sooner rather than later. **Each time yields fell from highs, the gold price began an impulsive bull market phase.**

UST 2Y (lhs), and Gold (rhs), 01/1996-05/2023

Source: 13D Research & Strategy, Reuters Eikon, Incrementum AG

Inflation traders should be paranoid, not complacent.
Zoltan Pozsar

Inflation-indexed bonds (TIPS) and gold are currently showing the biggest divergence since 2005. Are we heading for a showdown between real interest-rate expectations priced by TIPS and the gold price? In this context, it is interesting to compare the price movements of the two corresponding assets. *Grosso modo,* a synchronization is discernible, but at phases the gold price has decoupled significantly from the performance of TIPS. **In particular, the phase in the mid-2000s stands out, when the gold price entered a pronounced bull market in an environment of a weak US dollar**. TIPS consolidated first on the back of slightly rising nominal yields and unspectacular inflation data. A repeat of this scenario would be possible in the near future, especially if the current US dollar weakness gains momentum.

GLD (lhs), in USD, and TIP (rhs), in USD, 01/2005–05/2023

Source: Reuters Eikon, Incrementum AG

This weaponization of the US dollar was no surprise to anyone – Trump had already weaponized it against Iran in particular.
Russell Napier

As already emphasized, we see gold as a structural beneficiary of the geopolitical showdown. On the central bank side, gold demand is currently driven by emerging markets. **From a game-theoretical perspective, however, it is quite likely that Western central banks will also experience a renaissance in gold demand in the coming years.** After all, gold reserves are a guarantee of having a strong hand in the geopolitical showdown.

An extremely interesting indicator in this context is the degree of coverage of the money supply by the gold reserves held by central banks. It shows what percentage of legal tender and commercial banks' deposits with the central bank are covered by central bank gold reserves.

Required gold price to cover monetary aggregates, in USD, 2023

Country	Gold holdings (in ounces)	M0	M1	M2
Canada	0	n/a	n/a	n/a
China	65,824,882	23,188	148,901	618,046
France	78,233,464	n/a	n/a	n/a
Germany	107,709,065	n/a	n/a	n/a
Italy	78,715,039	n/a	n/a	n/a
G8 Eurozone	280,918,750	22,905	43,643	59,702
Japan	27,160,830	31,228	283,337	327,232
Russia	74,791,808	2,644	7,580	14,177
Switzerland	33,389,200	19,886	23,629	34,017
UK	9,962,182	11,684	300,141	388,193
USA	261,498,000	21,304	79,611	87,767
Total	**1,018,203,219**	**15,317**	**55,040**	**95,408**

Source: Brent Johnson, Santiago Capital, Bloomberg, World Gold Council, tradingeconomics.com, Incrementum AG

Rip Current – after the wave break comes the current

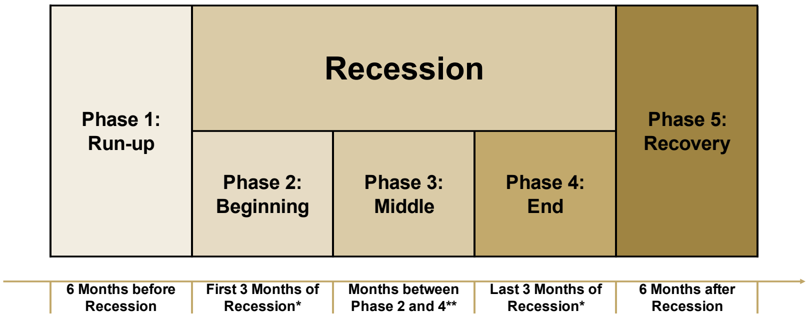
When the rip current comes, stay calm and go with the flow.
Surfer wisdom

The next few months will show us whether the US economy can withstand the recessionary current. We are putting in our bid against it, because the breaking of the biggest inflation wave of the last four decades is now manifesting itself in an ever stronger current that can hardly be withstood.

Big waves are a whole different ball game. You're riding a wave with an immense amount of speed and power, generally over 10 meters. On the face of the wave, obviously life and death thoughts start to happen.
Kelly Slater

After focusing primarily on stagflation in the *In Gold We Trust* report 2022, we have turned our focus this year to how investors can best navigate recessionary flows. In this context, we developed the *Incrementum Recession Phase Model* (IRPM), which is presented in detail in the chapter "The Showdown in Monetary Policy". This model aims to analyze asset performances during the different phases of a recession and offers insightful insights into which assets can be used profitably and at what times during a recession to mitigate risk. The model is divided into the following 5 recession phases: a pre-recession phase (phase 1), the actual recession broken down into three phases, and the recovery (phase 5).

Incrementum Recession Phase Model



Source: Incrementum AG

*For short recession periods less than 3 months
** For recession periods with 6 or less months no Phase 3 is identified

Invest in things that have never happened before, hedge for regression to the mean, and plan for the unimaginable.
John Burbank

The evaluation for gold, silver, equities, commodities, and mining stocks shows that, overall, gold is best suited as a recession hedge, with an average performance of 10.6% throughout the recession. However, there are significant differences in gold's performance during the different recession phases. While in phase 1 and phase 2 gold's performance is still very positive at 10.9% and 5.7%, respectively, especially compared to the performance of the other assets, it is much weaker in the later phases (3-5) at only 2.9%, 2.7% and 2.6%.

Average Asset Performance – *Incrementum Recession Phase Model*

Asset	Recession*	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Gold	10.6%	10.9%	5.7%	2.9%	2.7%	2.6%
Silver	-9.0%	31.5%	0.8%	-10.9%	3.5%	17.4%
Stocks	-5.3%	-2.8%	-6.0%	-13.2%	12.6%	8.6%
Commodities	-6.3%	6.4%	0.2%	-6.5%	-0.2%	5.0%
Mining Stocks	5.4%	8.9%	8.5%	-11.7%	8.3%	24.3%

Source: Reuters Eikon, Incrementum AG

Silver is not a reliable recession hedge, with an average performance of -9.0% throughout the recession. This is probably because silver is perceived much more as a cyclically sensitive industrial metal than as a monetary metal in the midst of the downturn. **In the months before and after the recession (phases 1 and 5), however, silver performs above average in comparison.**

In times of recession it's not wise to argue about the price of gold.
Robin Sacredfire

On average, equities and commodities have a negative performance during a recession, with equities performing best in phase 5, with 12.6%, and commodities in phase 1, with 6.4%. However, mining stocks show that not all stocks post losses during a recession. **Except for phase 3, mining stocks show a positive performance on average.** It is remarkable that all assets except for commodities can gain in phases 4 and 5. Once again, mining stocks stand out, with an average performance in phase 4 of 8.3% and 24.3% in phase 5.

Overall, our analysis shows that there are **significant differences in the performance of different assets during a recession** and that investors need to proceed cautiously and strategically to be successful in each phase of the recession cycle.

The Gold Price Forecast in Times of Recessionary Flow

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

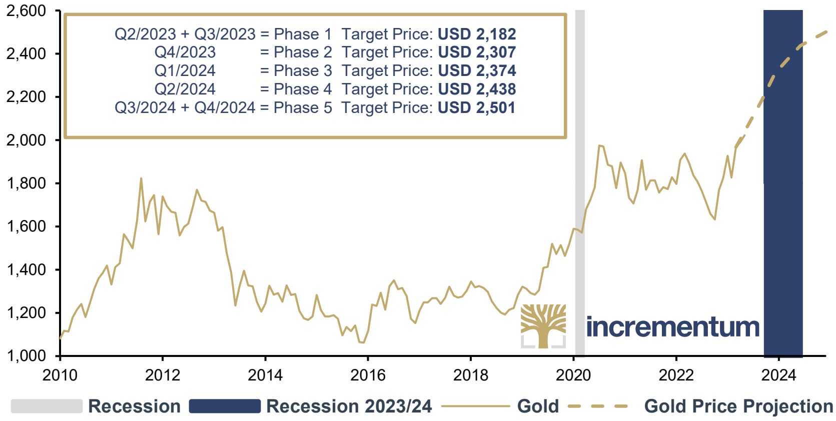
As every year, we want to conclude with the short-term development of the gold price. This year, due to the high probability of a recession, we draw on the economic trend for our gold price forecast. We think that recessionary tendencies, which are becoming more and more pronounced, as we detailed in the chapter "The Showdown in Monetary Policy", will be the main driver for gold in the near future. **Our *Incrementum Recession Phase Model* is ideally suited to anticipate gold price developments in this environment.**

I love it when a plan comes together.
Colonel John "Hannibal" Smith, The A-Team

As with any forecast, numerous assumptions have to be made. **Our gold price forecast was calculated based on the average gold performance in each phase, assuming the onset of a recession in the US as of Q4/2023,** implying that we have already been in phase 1 of our proprietary recession phase model since the beginning of Q2/2023. The forecast extends to year-end 2024, the point at which all recession phases will have been completed under the assumptions we have made.

As a short-term price target, we have set the closing price of gold in US dollars at the end of the current year, which also marks the end of the second phase (initial phase of the recession itself). **According to our projection, the gold price would be trading at around USD 2,300 at this time.**

Gold, and Gold Price Projection Based on the *Incrementum Recession Phase Model, in USD, 01/2000-12/2024e**



Source: Reuters Eikon, Incrementum AG
*based on the assumption of a recession start in the USA in Q4/2023

If the forecast is allowed to continue until the end of the last phase of the *Incrementum Recession Phase Model*, the final result is a **gold price of just under USD 2,500 at the end of 2024.**

However, it is important to emphasize that the fulfillment of the recession prerequisite is crucial to achieve this price development. In the absence of a recession, there is a possibility of significant deviation from the projected price.

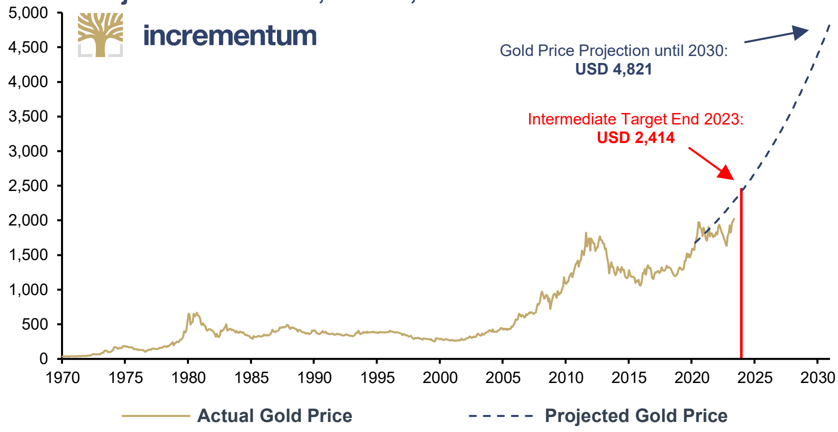
Update on gold price forecast until the end of the decade

Loyal readers will also remember the gold price forecast model we published in our *In Gold We Trust* report 2020,[93] with a price target at the end of the decade. **At that time we calculated – with the gold coverage ratio as the central input factor – a price target of just under USD 4,800 by the end of 2030.**

In order for an economic forecast to be relevant, it must be combined with a market call.
Dave Rosenberg

As last year, we do not want to deprive you of the interim status of our long-term forecast. **In order to remain exactly on track, the gold price would have to rise to just above USD 2,400 by the end of this year.** That is just under 4.6% or around USD 100 higher than the price target of our recession phase model of USD 2,307. **Based on the April 2023 closing price of USD 1,990, this would correspond to a 21.3% increase in the gold price by the end of 2023.**

Intermediate Status of the Gold Price Projection until 2030: Gold, and Projected Gold Price, in USD, 01/1970-12/2030



Source: Reuters Eikon, Incrementum AG

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

We acknowledge the ambitious nature of the projected price increase until the year's end. Such a rapid price increase within a period of 8 months requires an exceptionally bullish environment for gold in the short term, which we do not consider as the base scenario but also do not want to dismiss. **Nevertheless, we firmly believe it is realistic for gold to at least reach new all-time highs in USD this year.**

We continue to adhere to our decade price target of approximately USD 4,800, as monetary policy dynamics, the economic outlook and, in particular, the geopolitical situation should provide considerable support for the gold price in the medium to long term. **After all, should uncertainty increase further in the coming months and a recession be priced in by the market in the course of the year, gold will play out its full potential.**

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

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

There are undoubtedly challenging times ahead for investors in the coming years as we find ourselves in the midst of monetary and geopolitical showdowns. Just as in a strategic move in a high-stakes poker game, gold not only plays the role of a reliable bet during uncertain times but also acts as ace in the hole, protecting the purchasing power of individuals and providing a steadfast defense against the wild swings of the financial markets. **For us, gold is the expression of a strong hand for investors.**

Even if it is not always easy, we would like to look to the future with optimism. The disappointments ahead will probably not be painless, but they could ultimately set in motion exciting economic and social dynamics. In these exciting times, we assert, as ever:

IN GOLD WE TRUST

About Us

Ronald-Peter Stöferle, 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), and *Goldstorm Metals Corp*. (GSTM). 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*.

Incrementum AG

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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Company Descriptions

Agnico Eagle

Agnico Eagle is a senior Canadian gold mining company, and third-largest gold producer in the world, with operating mines located in Canada, Australia, Finland and Mexico, as well as exploration and development activities in these countries and the United States.

www.agnicoeagle.com

Asante Gold

Asante Gold has developed its 400,000 oz per year production profile through organic growth and focused acquisitions. We believe in responsible development and strive to be Ghana's foremost gold producer and employer of choice.

www.asantegold.com

Aurion Resources

Aurion is a well-funded, Canadian explorer operating in an emerging major gold camp in Finland's Central Lapland. The Company is making new discoveries on its Flagship Risti and Launi projects, and JVs with B2Gold and Kinross.

www.aurionresources.com

Caledonia Mining

Caledonia Mining is a profitable, dividend-paying gold miner, with a strong growth profile; since November 2021 has acquired Maligreen, Motapa and Bilboes. Its vision is to become a Zimbabwe focused multi-asset gold producer.

www.caledoniamining.com

Dakota Gold

Dakota Gold (NYSE American: DC) is a South Dakota-based responsible gold exploration and development company with a specific focus on revitalizing the Homestake District of South Dakota.

www.dakotagoldcorp.com

EMX Royalty

EMX has a 20-year track record of smart deals. With more than 300 royalties and investments, EMX looks forward to a bright future with diversification into gold, copper, battery metals, strong partners like Franco Nevada, and rapidly increasing cash flow.

www.emxroyalty.com

Endeavour Mining

As a leading global gold producer and largest in West Africa, Endeavour is committed to the principles of responsible mining and delivering sustainable value to all stakeholders. Endeavour is listed on the LSE and TSE under the symbol EDV.

www.endeavourmining.com

Endeavour Silver

Endeavour Silver is a mid-tier precious metals mining that owns two underground, silver-gold mines in Mexico, and has a compelling pipeline of exploration and development projects to facilitate its goal to become a senior silver producer.

www.edrsilver.com

Flexgold

Flexgold is the smart way to invest in physical precious metals, as flexible and simple as never before. With flexgold, SOLIT sets the gold standard for trust, security and transparency.

www.flexgold.com

Hecla Mining Company

Hecla Mining Company (NYSE: HL) is the largest primary silver producer in the United States and the sixth largest gold producer in Quebec. Hecla is also the third largest US producer of both zinc and lead.

www.hecla-mining.com

Karora Resources

Karora is TSX-listed gold miner (TSX: KRR) with operations in the tier 1 jurisdiction of Western Australia. Karora has a proven management team and is growing production to 170-195 koz by 2024.

www.karoraresources.com

Matterhorn Asset Management AG

The global authority in Wealth Preservation through precious metal acquisition and storage. A world-renown team offers personal service to investors with direct access to the world's largest and safest private vaults.

www.goldswitzerland.com

Minera Alamos

Minera Alamos is a new gold producer going through the ramp up of its Santana mine and fast tracking permitting for its second flagship mine: Cerro de Oro. Specializing in low capex builds the Minera model remains insulated from inflationary pressures.

www.mineraalamos.com

Münze Österreich

Internationally renowned for its precious metal processing, Münze Österreich AG produces Austria's circulation coins, Vienna Philharmonic bullion coins in gold, platinum and silver, and gold bars.

www.muenzeoesterreich.at

New Zealand Bullion Depository

Our mission is to provide the best in gold bullion storage, with unparalleled service and discretion. Your gold is allocated, segregated and secured in our purpose-built world class New Zealand facility, giving you secure peace of mind.

www.nzbd.com

philoro EDELMETALLE

philoro is one of the market leaders in Europe in the field of precious metals trading and your reliable partner for investments in gold and silver, platinum and palladium.

www.philoro.com

Reyna Gold

Reyna Gold is focused on district-scale exploration on the major gold belts in Mexico, with a property portfolio of over 57,000 hectares, a world class exploration team and proven management team.

www.reynagold.com

Sprott

Sprott is a global asset manager providing investors with access to leader in precious metals and energy transition investments.

www.sprott.com

Tudor Gold

TUDOR GOLD Corp. is an Exploration company in the Golden Triangle region in B.C., Canada, which is advancing the Treaty Creek project that hosts a mineral resource of 23.4 Moz AuEQ (Indicated) plus 7.4 Moz AuEQ (Inferred).

www.tudor-gold.com

Victoria Gold

Victoria Gold ("VGCX") is Leading Yukon's New Gold Rush. As at 31Dec22 the Eagle Gold mine Reserve is 2.6 m oz Au (124 m tonnes grading 0.65 g/t), and is open at depth and along strike. Exploration priority targets include Raven and Lynx.

www.vgcx.com

Ximen Mining

Ximen Mining (TSX.V XIM) is focused on responsible development, sustainable mining and exploration of its precious metals properties in southern BC, Canada, as it advances its Kenville Gold mine.

www.ximenminingcorp.com

In Gold We Trust Report